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PROCEEDINGS

OF THE

AMERICAN ASSOCIATION OF MUSEUMS

VOL. V

1911

PROCEEDINGS

OF THE

AMERICAN ASSOCIATION OF MUSEUMS

RECORDS OF THE SIXTH ANNUAL MEETING
HELD AT BOSTON, MASS.

MAY 23–25, 1911

CHARLESTON, S. C.
1911

EDITED BY
PAUL M. REA, SECRETARY
THE CHARLESTON MUSEUM
CHARLESTON, S. C.

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OFFICERS OF THE AMERICAN ASSOCIATION OF MUSEUMS

1911–1912

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Metropolitan Museum of Art, New York

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PROCEEDINGS

OF THE

Sixth Annual Meeting

OF THE

American Association of Museums

HELD IN BOSTON, MASS.

May 23 – 25, 1911

SESSION OF TUESDAY, MAY 23

Morning

The Association assembled at the rooms of the Boston Society of Natural History at 9 a. m. for registration and inspection of the Museum. At 10.30 a.m. the opening session was called to order at the Museum of Fine Arts, President Frederick J. V. Skiff presiding.

The Chair introduced Dr. Arthur Fairbanks, director of the Museum of Fine Arts, who extended a cordial welcome and described the general plan of the new building of the Museum. After a brief response by Dr. Skiff the roll was called by Secretary Paul M. Rea and the following is a list of the members present, with the institutions represented by them.

ROLL OF ATTENDANCE

Mr. Thomas W. Adickes, North Carolina State Museum, Raleigh, N. C.
Dr. Edwin Atlee Barber, Pennsylvania Museum and School of Industrial Art, Philadelphia, Pa.
Mr. John W. Beatty, Carnegie Institute, Pittsburgh, Pa.
Mr. Herbert H. Brimley, North Carolina State Museum, Raleigh, N. C.
Mr. C. Emerson Brown, Peabody Museum, Salem, Mass.
Mr. Arthur S. Coggeshall, Carnegie Museum, Pittsburgh, Pa.
Mr. A. H. Cooper-Prichard, American Numismatic Society, New York City.

Dr. Joseph A. Cushman, Boston Society of Natural History, Boston, Mass.
Mr. George Francis Dow, The Essex Institute, Salem, Mass.
Dr. Carl H. Eigenmann, Carnegie Museum, Pittsburgh, Pa.
Mr. Huger Elliott, Rhode Island School of Design, Providence, R. I.
Dr. Arthur Fairbanks, Museum of Fine Arts, Boston, Mass.
Miss Sarah G. Flint, Museum of Fine Arts, Boston, Mass.
Mr. Edward W. Forbes, Fogg Art Museum, Cambridge, Mass.
Prof. Kuno Francke, Germanic Museum, Cambridge, Mass.
Mr. Wm. M. R. French, Art Institute of Chicago, Chicago, Ill.
Miss Anna Billings Gallup, Children's Museum, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
Miss Elizabeth M. Gardiner, Worcester Art Museum, Worcester, Mass.
Mr. Frank Butler Gay, Wadsworth Atheneum, Hartford, Conn.
Mr. Benj. Ives Gilman, Museum of Fine Arts, Boston, Mass.
Mr. Wm. H. Goodyear, Brooklyn Institute Museum, Brooklyn, N. Y.
Dr. G. B. Gordon, University Museum, Philadelphia, Pa.
Dr. Sigmund Graenicher, Public Museum of the City of Milwaukee, Milwaukee, Wisconsin.
Miss Delia Isabel Griffin, The Fairbanks Museum of Natural Science, St. Johnsbury, Vt.
Mr. A. H. Griffith, Detroit Museum of Art, Detroit, Mich.
Mr. F. S. Hall, State Museum, Seattle, Wash.
Mrs. Robert C. Hall, Pittsburgh, Pa.
Mr. Samuel Henshaw, Museum of Comparative Zoology, Cambridge, Mass.
Dr. W. J. Holland, Carnegie Museum, Pittsburgh, Pa.
Prof. Franklin W. Hooper, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
Dr. Marshall A. Howe, New York Botanical Garden, New York City.
Miss Winifred E. Howe, Metropolitan Museum of Art, New York City.
Mr. Henry R. Howland, Buffalo Society of Natural Sciences, Buffalo, N. Y.
Mr. L. W. Jenkins, Peabody Museum, Salem, Mass.
Mr. Charles W. Johnson, Boston Society of Natural History, Boston, Mass.
Mr. Henry W. Kent, Metropolitan Museum of Art, New York City.
Mr. Stanley B. Lothrop, Museum of Fine Arts, Boston, Mass.
Dr. Frederic A. Lucas, Museums of the Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
Mrs. Frederic A. Lucas, Brooklyn, N. Y.
Mr. J. Arthur MacLean, Museum of Fine Arts, Boston, Mass.
Mr. H. L. Madison, Park Museum, Providence, R. I.
Mr. Milton Matter, Art Association of Indianapolis, Indianapolis, Ind.
Prof. Wm. C. Mills, Ohio State Archeological and Historical Society, Columbus, Ohio.
Dr. Charles S. Minot, Harvard Medical School, Boston, Mass.
Mr. Warren K. Moorehead, Phillips Academy, Andover, Mass.
Mr. E. L. Morris, Brooklyn Institute Museum, Brooklyn, N. Y.
Mrs. E. L. Morris, Brooklyn, N. Y.
Miss Frances Morris, Metropolitan Museum of Art, New York City.
Mr. Albert P. Morse, Wellesley College, Wellesley, Mass.
Prof. Edward S. Morse, Peabody Museum, Salem, Mass.

Mr. Robert Cushman Murphy, Brooklyn Institute Museum, Brooklyn, N. Y.
Miss Florence V. Paull, Museum of Fine Arts, Boston, Mass.
Dr. Charles Peabody, Peabody Museum, Cambridge, Mass.
Mr. Albert Hastings Pitkin, Wadsworth Atheneum, Hartford, Conn.
Miss Agnes L. Pollard, Museum of Staten Island Association of Arts and Sciences, New Brighton, N. Y.
Mr. Sydney Prentice, Carnegie Museum, Pittsburgh, Pa.
Miss Alice E. Putnam, Cambridge, Mass.
Dr. Frederick W. Putnam, Peabody Museum, Cambridge, Mass.
Mrs. Frederick W. Putnam, Cambridge, Mass.
Dr. Percy E. Raymond, Geological Survey of Canada, Ottawa, Ontario.
Mr. Paul M. Rea, The Charleston Museum, Charleston, S. C.
Mrs. Paul M. Rea, Charleston, S. C.
Mr. Edward Robinson, Metropolitan Museum of Art, New York City.
Mr. John Robinson, Peabody Museum, Salem, Mass.
Mr. Boyd P. Rothrock, Pennsylvania State Museum, Harrisburg, Pa.
Mrs. Boyd P. Rothrock, Pennsylvania State Museum, Harrisburg, Pa.
Mr. Louis Earle Rowe, Museum of Fine Arts, Boston, Mass.
Mr. Herbert E. Sargent, Kent Scientific Museum, Grand Rapids, Mich.
Miss Mabel A. Shields, The Fairbanks Museum of Natural Science, St. Johnsbury, Vermont.
Mr. George Shrosbree, Public Museum of the City of Milwaukee, Milwaukee, Wis.
Dr. Frederick J. V. Skiff, Field Museum of Natural History, Chicago, Ill.
Miss Anna D. Slocum, Pond Street, Jamaica Plain, Mass.
Miss E. M. Spinney, Boston, Mass.
Dr. Victor Sterki, Carnegie Museum, Pittsburgh, Pa.
Mr. Charles R. Toothaker, The Philadelphia Museums, Philadelphia, Pa.
Mrs. Charles R. Toothaker, Philadelphia, Pa.
Mr. Henry L. Ward, Public Museum of the City of Milwaukee, Milwaukee, Wis.
Miss Laura L. Weeks, The Charleston Museum, Charleston, S. C.
Mr. Charles C. Willoughby, Peabody Museum, Cambridge, Mass.
Miss Mildred W. Wilson, Philadelphia, Pa.
Dr. W. P. Wilson, The Philadelphia Museums, Philadelphia, Pa.

The report of the Secretary was then presented as follows:

REPORT OF THE SECRETARY

Until the latter part of October the greater part of the time of the Secretary and all the time of his assistant was occupied with the completion and publication of the Directory of American Museums, which appeared as volume x, number 1, of the *Bulletin* of the Buffalo Society of Natural Sciences.

In accordance with the original arrangement 500 copies of the Directory were delivered to the Secretary for distribution. A mailing list was prepared, including all active and sustaining members of the

Association, and a selected list of 256 institutions entitled to receive the Directory in recognition of their co-operation in furnishing information. Application forms were mailed to all addresses on this list, except 37 institutions which regularly receive the publications of the Buffalo Society of Natural Sciences. Approximately 250 of these forms have been returned and the same number of Directories mailed.

The institutions included in the Directory may be roughly classified according to the nature of their collections as follows:

United States—science, 265; historical, 137; art, 53; zoological and botanical gardens, aquaria, etc., 59; science and art, 31; science and history, 13; art, science, and history, 12; art and science, 10; medicine and anatomy, 5; history and science, 4; miscellaneous, 12. Total, 601.

Canada—science, 29; history, 3; miscellaneous, 5.

Bermuda—science, 1; aquarium, 1.

Mexico—science, 9; history, 2; industry, 2; science and history, 1; science and art, 1; unclassified, 6.

Central America—science, 1.

South America—science, 13; art, 3; history, 1; art, science, and history, 1; history and science, 1; unclassified, 6.

The chief sources of support of these museums in the United States are as follows: From schools, colleges, and universities, 215; from societies, associations, etc., 196; from city governments, 86; from endowments or private sources, 39; from state governments, 24; from the national government, 7.

This classification may be varied somewhat according as the various collections maintained by one college or other organization are grouped as a single institution or as separate institutions. The most interesting conclusion is that the greater part of our museums are maintained by schools and colleges. The number maintained by societies includes many small historical museums, while those supported by cities include a large number of zoological parks. Those depending on state or national support are either separate institutions or maintained in connection with governmental departments.

It has been the expectation of the Association that the Directory would serve as a basis for further and more detailed studies of various problems affecting American museums. The statistics briefly enumerated above suggest many desirable lines of investigation and the titles of papers already filed with the Secretary indicate that many of these problems are attracting the attention of our members. Indeed,

a growing desire for information regarding museum organization and administration is manifest throughout the country, and other societies and associations are being led to consider the means of providing such information. It therefore seems that this Association has an opportunity of fulfilling a real need, but that to do this will require the maintenance throughout the year of an organized effort to gather and collate helpful information and to diffuse the same among the smaller museums. This work may be reasonably expected to bring substantial increases in the membership of the Association, but provision would have to be made to carry on the work until this point is determined. It was the intention of the Secretary to make a systematic effort to increase our membership during the past year, but lack of time has made this impossible.

The following new members have been received since the last meeting:

NEW MEMBERS

Sustaining Members

Germanic Museum, Harvard University, Cambridge, Mass.

Active Members

Mr. Thomas Barbour, Curator of Oceanica, Harvard University, Cambridge, Mass.

Mr. C. Emerson Brown, Assistant in Vertebrate Zoology, Peabody Museum, Salem, Mass.

Dr. John M. Clarke, Director, New York State Museum, Albany, N. Y.

Mr. A. H. Cooper-Prichard, Librarian, American Numismatic Society, New York City.

Dr. Joseph A. Cushman, Assistant Curator, Boston Society of Natural History, Boston, Mass.

Mr. Huger Elliott, Director, Rhode Island School of Design, Providence, R. I.

Mr. Edward W. Forbes, Director, Fogg Art Museum, Harvard University, Cambridge, Mass.

Mr. Frank Butler Gay, Director, Wadsworth Atheneum and Morgan Memorial, Hartford, Conn.

Mr. F. S. Hall, Curator, State Museum, University of Washington, Seattle, Wash.

Mr. Arthur W. Henn, Assistant Curator, Indiana University Museum, Bloomington, Ind.

Dr. George P. Howe, Peabody Museum, Harvard University, Cambridge, Mass.

Dr. William Evans Hoyle, Director, National Museum of Wales, City Hall, Cardiff, Wales.

Dr. Robert T. Jackson, Assistant Curator in charge of Paleontological Collections, Boston Society of Natural History, Boston, Mass.

Mr. Albert P. Morse, Curator of Zoology, Wellesley College, Wellesley, Mass.
Mr. Robert Cushman Murphy, Curator, Division of Mammals and Birds, Brooklyn Institute Museum, Brooklyn, N. Y.
Dr. Charles Peabody, Assistant in European Archeology, Peabody Museum, Harvard University, Cambridge, Mass.
Miss Agnes L. Pollard, Museum Assistant, Staten Island Association of Arts and Sciences, New Brighton, N. Y.
Prof. Carlos E. Porter, Director, Museo de Historia Natural de Valparaiso, Santiago, Chile.
Mr. John Robinson, Keeper of East India Marine Society Relics, Peabody Museum, Salem, Mass.
Miss Anna D. Slocum, Pond Street, Jamaica Plain, Mass.
Dr. Victor Sterki, Assistant in Conchology, Carnegie Museum, Pittsburgh, Pa. Address: New Philadelphia, Ohio.
Mr. W. P. Taylor, Assistant Curator of Mammals, Museum of Vertebrate Zoology, University of California, Berkeley, Cal.
Miss Edith Tobitt, Librarian, Omaha Public Library and Museum, Omaha, Neb.
Dr. Alfred M. Tozzer, Assistant in Central American Archeology, Peabody Museum, Harvard University, Cambridge, Mass.
Miss Laura L. Weeks, Secretary to the Director, The Charleston Museum, Charleston, S. C.

Associate Members

Miss Sarah G. Flint, Assistant, Museum of Fine Arts, Boston, Mass.
Mrs. Robert C. Hall, Pittsburgh, Pa.
Miss Winifred E. Howe, Metropolitan Museum of Art, New York City.
Mr. Stanley B. Lothrop, Museum of Fine Arts, Boston, Mass.
Mrs. Frederic A. Lucas, Brooklyn, N. Y.
Mr. J. Arthur MacLean, Assistant, Museum of Fine Arts, Boston, Mass.
Mrs. E. L. Morris, Brooklyn, N. Y.
Miss Frances Morris, Assistant, Metropolitan Museum of Art, New York City.
Miss Florence V. Paull, Assistant, Museum of Fine Arts, Boston, Mass.
Miss Alice E. Putnam, Cambridge, Mass.
Mrs. Frederick W. Putnam, Cambridge, Mass.
Mrs. Paul M. Rea, Charleston, S. C.
Miss Mabel A. Shields, Curator, The Fairbanks Museum of Natural Science, St. Johnsbury, Vt.
Miss E. M. Spinney, Boston, Mass.
Mrs. Charles R. Toothaker, Philadelphia, Pa.
Miss Mildred W. Wilson, Philadelphia, Pa.

The time consumed during the summer on the Directory, combined with the prolonged illness of the assistant to the Secretary, necessitated the postponement of the publication of the proceedings of the Buffalo meeting until the spring. These were, however, mailed early in May to all members except those which had been reported by the Treasurer as in arrears for dues.

The Secretary regrets to record the death of the following active members of the Association: Dr. Arthur Erwin Brown, Sir Caspar Purdon Clarke, and Prof. Halsey C. Ives.

Respectfully submitted,

Paul M. Rea, *Secretary.*

On motion the report of the Secretary was accepted. Dr. W. P. Wilson then presented the report of the Treasurer, which was referred to an auditing committee, consisting of Messrs. Ward, Howland, and Mills.

It was then voted that at the session of the following morning the order of business be suspended immediately after convening, in order to receive the report of a committee appointed to prepare memorials of deceased members. The Chair appointed to this committee Mr. Edward Robinson, director of the Metropolitan Museum of Art; Mr. Wm. M. R. French, director of the Art Institute of Chicago; and Dr. W. J. Holland, director of the Carnegie Museum. Mr. Robinson stated that he was obliged to return to New York and would therefore be unable to serve. The Chair then appointed Dr. Arthur Fairbanks, director of the Museum of Fine Arts, to serve as chairman in place of Mr. Robinson. By unanimous consent the order of business was suspended in order that Mr. Robinson might speak of his association with Sir Purdon Clarke.

Mr. Edward Robinson (Metropolitan Museum of Art).—"I simply want to record, whatever may be said by your committee, the testimony of those who served with and under Sir Purdon Clarke as to the qualities he brought to his work at the Metropolitan Museum and the affection which he gained in a short time and maintained during his tenure of office there, on the part of everybody with whom he was connected, whether it be the president, the staff, the working people, or the public at large. Certainly my relations with him might have been extremely unpleasant and difficult had it not been for the generous spirit with which Sir Purdon regarded me as a colleague and member of his staff. When we had our first meeting after my appointment nothing could have been finer, kinder hearted, or more endearing than the way in which he welcomed me and endeavored from that time to the end to efface himself continually for the interests of the Museum and to put everybody in the Museum, without exception, on good terms with one another and with himself. There are many, I know, who saw Sir Purdon only at the time of the more advanced period of

his illness, and some of these formed an entirely wrong impression of the man. I would like to say a word on that point, as only one who worked with him can best testify to. Nobody could have looked forward more than Sir Purdon did to the work which he was to take up in America as the director of the Metropolitan Museum. Coming, as he was, almost to the end of his period at South Kensington, it was to him like the beginning of a new life, a life full of promise, full of opportunity, full of everything that a museum official could look forward to in the way of a future and a new career, but unfortunately for him and for all of us, he was already a stricken man at the time he came to New York. At first none of us realized the fact, but he had not been with us many months before those of us who came into daily contact with him were made aware of it and from that time during the rest of his stay in New York it was one of the most heroic, touching struggles that I have ever witnessed on the part of any man. He would not acknowledge to himself or to others that he was not in full physical condition. The disappointment that he labored under when he found, month after month, that he was not able physically to handle the task which he had undertaken, made his experience there one that was profoundly touching, and during that time there was never a word of impatience, never a word of complaining or of resentment that others had to do the work which he hoped to do, but which he found himself incapacitated for on account of his health. Then that terrible time last year when he undertook that lecture course, wanting to fill the engagements which he had made in different parts of the country, trying to popularize his work, the work of museums in the west. He returned from it in the spring really more dead than alive. The change that had been growing, perhaps unperceived by many, became much more rapid, and when in May it was necessary for him to leave to go to England, as he hoped, merely for a few months' rest, his widow has since told me that she despaired even of his being able to reach the other side of the ocean alive. After a while he gained a sort of recovery, but the disease that was upon him was a fatal one, and although he recovered a certain amount of his health and spirit, it was by the advice of his physician after a year in England that he resigned his position definitely, to his great disappointment and the great disappointment of all of us who had been with him.

"The quality that stood out most prominently to those of us who worked under him, during the time that he was in New York, was that extreme amiability of disposition, that extreme courtesy towards all

of us, that considerateness with which his relations with all of us were constantly and invariably marked, and that entire desire for self-effacement; I never knew a man in such a position less interested in his own personal advancement as distinguished from that of the Museum, than he was. We all felt, when we said good-bye to him, that it was good-bye to as true a friend as any set of men and women could work for as their superior in official work." (*Applause.*)

President Skiff here suggested to the Association the desirability of having one of the older members undertake to bring together museum workers who are desirous of new positions, and museums which need trained workers in any of their various departments. The suggestion was favorably received and Dr. Skiff finally offered to undertake the work.

In the absence of a report from the committee on postal rates the committee was discharged and a new committee appointed, consisting of Messrs. Skiff, Wilson, Holland, and Lucas; this committee to report at the next annual meeting.

The following amendments to the Constitution were submitted by the Secretary with the favorable recommendation of the Council and after discussion were duly adopted by the Association: At the end of Article IV add: "An Assistant Secretary may also be elected." Change Article VIII to Article IX and insert a new Article VIII as follows: "The publications of the Association shall be distributed free to all Sustaining and Active Members who have paid their dues for the year of issue. Associate Members may obtain the *Proceedings* in paper covers at one dollar, or in cloth binding at one dollar and twenty-five cents." An amendment to strike out the second sentence failed of adoption.

The Secretary announced that in order to utilize the surplus stock of *Proceedings* and Directories, and as a means of increasing the membership of the Association, he was authorized by the Council to offer a copy of the Directory and a full set of the *Proceedings*, for the cost of transportation only, to new Sustaining Members and at half price to new Active Members, until such surplus stock shall be exhausted.

Secretary Rea then offered the following resolutions, which were unanimously adopted by a rising vote:

> *Resolved*, That the American Association of Museums desires to express its deep appreciation of the generous action of the Buffalo Society of Natural Sciences in defraying the expense of publication of the Directory of American Museums; and further,

Resolved, That the Association desires to acknowledge the unfailing courtesy and helpful co-operation of Mr. Henry R. Howland, superintendent of the Buffalo Society of Natural Sciences, in the arrangement of the details of publication of the Directory.

Mr. Edward Robinson, director of the Metropolitan Museum of Art, then discussed the organization and work of the Metropolitan Museum.

Mr. Louis Earle Rowe, docent, Museum of Fine Arts, Boston, then read the following paper:

DOCENT SERVICE AT THE MUSEUM OF FINE ARTS

The last twenty-five years have witnessed many new solutions of museum problems. Many of these have been of a decidedly experimental nature, and because of adverse results, little has come of them; others have given great promise of benefiting both museum and public. Of the latter perhaps the most beneficial in some respects has been the offer of docent service to the public and students. This branch of museum activity is of such great importance that a description of the results of the work at the Boston Museum of Fine Arts may prove of interest to all.

Within recent years there has been much criticism directed against museums, a fair sample of which is the statement offered recently by an American artist and critic, who claimed that the museum was "a cold storage warehouse for works of art." If this be true, then the museum has been blind to its greatest opportunity. Of course there is no denying that there are many museums, both art and others, which lie open to such criticism. But in this age of competition, of business acumen, and of disregard for subjects and objects suspected of having little practical value, it is imperative that the museum, for its own preservation, should insist upon and develop its educational function, in this way keeping its interests and results before the supporting public.

However, the benefit to the museum is of secondary importance compared to its influence upon the public. It is absolutely essential that visitors should realize that the collections of a museum are quite as essential to the study of history, or literature, or to the development of design as a laboratory is to the study of chemistry or physics. There are many persons who readily admit the importance of the sense

of appreciation and taste, who do not yet realize that the best method of acquiring these is by exercising their sense of appreciation before the original objects when possible. One of the most striking features of docent service at the Boston Museum has been the constant evidence of desire for information on the part of visitors. This, coupled with the eagerness with which most of the visiting public make use of labels, gallery pamphlets, and catalogs, shows an interest which no museum can neglect. If the museum itself will not supply docents who have some knowledge of the monuments at first hand, it runs great danger of the public's making use of the ordinary guide, who is merely interested in pointing out the sights, and who rarely has interest in the objects under discussion. Such a state of affairs is one that would prove very detrimental to museum and public alike. It was in recognition of this danger and the constant desire for information on the part of the public that docent service was inaugurated and carried forward to the point where its possibilities for good can be easily grasped by all.

After a sufficient period of careful consideration of the advisability of such a service, the Boston Museum appointed a member of the staff to devote a portion of his time and energies to the development of such a branch of educational work. This was in April, 1907, and since that time progress has been marked, while, as will be seen, the field of application has been constantly widening. From the very start, the emphasis has been laid, in Boston at least, on the fact that "docent service is a function and not an office." In other words, the docent is to give but a fraction of his time to the docent service, while his especial work may be and has been up to the present directly concerned with one special department. One of the chief points about the service is that it is offered without any charge. Another important fact that is characteristic of the docent service is that the class or group of persons is not dealt with in a classroom unless the party is too large to be easily managed in the galleries, but is taken before the objects themselves and every effort is made to adapt the points illustrated by the object to the individual needs of the visitors.

At first the docent service was limited to week days, and the demand became so great that several persons were appointed to serve as docents in addition to their other duties. The effort through the whole of its history has been to limit the hour spent with the docent to a small section of the building, a department at least, or if possible a particu-

lar group of objects in a single department. So responsive did the public become, that it usually was necessary to make appointments several days or weeks ahead. In order that visitors might come into closer relations with the departments and the curators in charge, a decided change was inaugurated in 1910, and an arrangement was made whereby a member of the staff in each department was at the service of any visitor as docent on one day each week. While this aimed at and did accomplish much toward relieving the pressure, the regular docent service was still continued for special visitors and others. In order that the visiting public might be the better served, a Sunday docent service was inaugurated, the speakers or docents usually being people outside of the Museum staff who conducted circuits of departments or discussed groups of objects in a more general sense. In the Sunday work as well as that of the week day the endeavor is to arouse and encourage as many questions as possible from such persons as care for particular information.

Generally speaking, the visitors divide themselves into two classes, the casual visitors and the students. As in every institution, there are visitors to the exhibition galleries who come from a sense of duty as one part of their sightseeing in the city, and their chief interest is to obtain in an hour some general idea of the building and its collections. Such a hurried survey is of great value as an introduction provided it excites enough interest to arouse a desire for repeated visits or deeper study. For that reason such a survey of the museum has been frequently given by the docent, whose chief endeavor during such a short and varied period is to limit the number of objects shown to the best which the museum possesses. It is hoped that in this way the visitor may carry away a few visual impressions of works of art which may be lasting.

The chief interest of the docent service is in the work it is doing for students of all classes. Aristotle tells us that the Greeks sought to instil into the minds of the children an appreciation and knowledge of the fine arts, so that when they became of age they might appreciate to the utmost degree the beauties of art and nature with which they would be surrounded. The same ought to be an essential function of any educational system, and it is one of the most neglected and yet most necessary of the considerations of the present. But it is not a discouraging outlook that is before us. On the contrary, the four years of docent service has proved that an increasing interest is being awakened, in the fostering of which the Museum, through its works

of art, and incidentally, its docents, may help along the work of the drawing or nature teacher. Not only is the Museum visited by pupils in the private schools and academies of all grades, but from the public schools come scholars not only of grammar grades, but also of classical and technical grades, until, in several schools at least, regular visits to the art museum have become a part of the calendar of the term. The colleges have always been quick to insist upon the original sources on which to base their conclusions, or illustrate the classroom work, and the docent service has also been at their disposal, while the record of service given shows clearly an increasing number of parties calling for assistance. To give a list of the institutions making use of the Museum and its collections, frequently calling for docent service, would be to name nearly all of the schools and colleges within a radius of fifty miles of Boston. To say that the value of the works of art in the Boston Museum to the student is pointed out, is the least that can be said.

Another branch of educational work deals with classes from the industrial schools, the members of which find a wealth of material in the Museum galleries. Whether it be history, dress, design, comparative style, development of form, use and balance of color, or any of the other many points which often interest the industrial school teacher, the illustrative material can usually be found at the Museum; and here again in many of the Boston industrial schools, visits to the Museum in groups for docent guidance are planned for, often weeks in advance.

In recent years many organizations have been engaged in the study of history, literature, or art, especially among the ladies' clubs. One of the most gratifying results of the docent service has been the way in which these clubs have accepted the service offered. In this way not only are the individual members benefited, but a powerful influence is directed towards artistic and educational welfare in many communities, as well as in the home.

The most important class of visitors, not only from the museum but from the individual point of view, is the private students who, working as they constantly do on some especial subject, often feel free, and rightly so, to request the services of a docent. In this way he can sometimes lighten the burden of a curator, whose services are not then required to answer minor questions. Of course it need not be stated that serious work is always under the direct supervision of the department heads, when very special studies are being made.

Enough has been said to give some idea of the diversity of the parties asking for docent service, and it might be interesting to restate the usual service desired. This in general comes under four heads: (1) a general view of the collections; (2) acquaintance with the best objects; (3) more or less thorough study of a single department; and (4) detailed study of one or at most a very few objects. It need not again be said that the latter is the one which the docent service endeavors to encourage.

There are one or two points of interest about the Boston development which should be noted. The first and most important is that no settled plan is followed out, for the fact is always recognized that each group or individual has different interests and requires varying treatment.

The attempt is made to get at the primary interest of the group and emphasize the illustrative material during the period. It was also found that little of any value can be assimilated by visitors after an hour has been spent, for "museum fatigue" is so readily apparent. Moreover, for the best results the party must be strictly limited to not more than twenty-five, since no more than that can comfortably examine the objects in a single case at the same time. It goes without saying that the smaller the group the more intimate may be the relations between the docent and the party of visitors, and there is greater freedom to ask questions. Above all, the docent endeavors to avoid any stereotyped account of the objects under discussion. In that way it differs absolutely from the usual guide service met with in Europe and elsewhere. One of the most dangerous and hidden pitfalls of all art-teaching is the emphasis often laid by lecturers or instructors on their own personal criticism. In some cases this may be most helpful, and should be given, at the instructor's discretion, on request from the student. The docent, however, should keep himself as far as possible in the background, and as before stated should strive to arouse the latent sense of appreciation and criticism which the visitor may possess. Some of the most beneficial results have been reached when the visitor has been induced to give his or her grounds for favorable or adverse criticism.

While in the case of docent service in the Boston Museum of Fine Arts very little importance is attached to any statement of the number of parties seeking aid in the galleries, still such tabulation gives some slight hint of the success of this branch of museum educational work. The following figures are therefore submitted:

DATE	SCHOOLS AND COLLEGES		CLUBS		OTHER VISITORS	TOTAL NUMBER OF PERSONS
	Classes	Persons	Parties	Persons		
1907 (Oct.–Dec.).....	—	—	—	—	—	437
1908.....	142	2,324	31	439	450	3,213
1909[1].....	55	1,200	25	565	89	1,854
1910.....	119	2,221	67	1,014	376	3,611
1911 (to May 1).....	57	1,009	58	812	83	1,904
	373	6,754	181	2,830	998	11,019

[1] April 1 to November 15 closed for removal of Museum.

Last, but not least, the docent service endeavors to emphasize the point that detailed study in American museums is of vital importance to anyone planning a European trip, for by developing the sense of appreciation here, quality will be all the more easily recognized wherever found.

Such, in brief, are some of the results and purposes of the docent service at the Boston Museum of Fine Arts. Inasmuch as the system is so elastic, it readily admits of modification to fit such conditions as might arise; so it is difficult to theorize about future policy. The favorable points noted in the brief summary are therefore all the more significant inasmuch as they are the results of experience and not of untried theory. Is it not fair to conclude then that an institution supported by public funds or erected for the benefit of the public, whether it be for the preservation of art or historical treasures, or for natural history in its many phases, must sooner or later furnish this information and accommodation?

Mr. Benj. Ives Gilman, secretary of the Museum of Fine Arts, Boston, then read the following paper:

THE PROBLEM OF THE LABEL

The problem of the label is a particular case of the general museum problem of conveniently associating information with objects shown.

To merit a place in a museum an object must have interest either for its own sake or for what it teaches. According as a museum

treats its contents primarily as treasures or primarily as teaching material, it belongs to one or the other of two classes, which may be called respectively the perceptive and the reflective. Museums of art exemplify the perceptive type; museums of science the reflective type. Both need to associate information with objects shown; but the museum of art does so primarily in order to foster a love of the particular concrete things it contains, the museum of science primarily in order to promote a knowledge of abstractions they illustrate. The contents of the one are sights, of the other signs. The problem of the label differs in importance accordingly in the two kinds of museum. In the museum of art the label is a means to the end of enjoying the treasure it accompanies; in the museum of science it represents the end of instruction for which the accompanying teaching material has been gathered. In the museum of art the problem of the label touches indirectly, in the museum of science immediately upon the ultimate purpose of the institution.

In the following discussion the problem will be considered only in so far as it relates to museums of art. Such is the museum in which we stand, whose governing body has declared that "it is to be what its name indicates—a museum of the fine arts; that its primary purpose is to gather and show the best obtainable works of genius and skill; that the application of its contents to industry and their illustration by archaeology are both within its scope, but that neither of them is its first object." This statement defines the perceptive museum. Accordingly, the association of object and information which we shall here consider is one in which the information is offered primarily for the sake of the object. We shall touch only upon what may be called the art side of the label problem, remembering that for museums of science the problem is a different and more fundamental one.

Information may be of two kinds—spoken and written.

Spoken information demands a speaker, and is therefore difficult to arrange for. Nevertheless, let a play on words help us remember that the best possible label is labial; heard not read. President Garfield's idea of a university—a log with Mark Hopkins at the other end—has its application to the search after information generally. But the Mark Hopkins are oftenest not to be found and the log is oftenest not at hand.

Written information remains. On or near a work of art and confined to the four chief questions about it—what, who, when, and where—it is called a label.

The immediate value to a visitor of answers to these four questions is two-fold; first, a negative value, that of relief from bewilderment over the work—in other words, the satisfaction of his chief curiosities about it; second, a positive value, that of the deepening of his impression from the work by all that he already knows about its subject, artist, time, and provenience. Incidentally, moreover, the four w's provide him with a name to know the work by; and ultimately, also, the memory of the work is vivified by what the visitor may hereafter learn about these matters; and vice versa.

The advantage of displaying the answers on a printed form affixed to the object is that the visitor receives them in pursuance of his sightseeing. This advantage is often thought indispensable. It is assumed that most sightseers would rather know nothing about what they are looking at than take any further trouble to find out about it. Such an opinion is nevertheless a patent blunder disproved in the experience of every traveler. What information about sights abroad has anyone ever gained from reading superscriptions upon them compared to what he has labored to carry away by reading guidebooks about them? Instead of being unwilling to turn away from a sight to learn about it, travelers are only too willing to do so. The inattention of the modern man to the visible world is a portentous cloud on the future of the objective arts generally. The supposed popular alternative—label or nothing—is a pseudo-dilemma. If fuller information is accessible, even at greater trouble, sightseers who accept any will often prefer it. The label is not a necessary factor in exhibition but an occasional convenience only.

The limited sphere of the label in the machinery of show becomes evident in considering its disadvantages.

These are at least seven-fold. First, the label is often unavailable. In a collection of small objects the description, maker, date, and source of some may have to go unspecified therewith for lack of convenient space. The complete labeling of any miscellaneous collection of exhibits may be said to be in general a physical impracticability.

Second, it is unsightly. Unlike an inscription, which is composed with the object, a superscription is in general an unharmonious addition thereto, and unless staring is apt to be illegible. All are agreed as to this.

Third, it is impertinent. It reflects on the object by proclaiming it unknown and on the beholder by proclaiming him ignorant.

Some one has suggested that it would facilitate matters at public

gatherings if all the dignitaries present should wear breastplates with their names and other personal particulars distinctly engraved thereon. All comers would then know at once whom they were looking at and would gain immensely more from the occasion. The suggestion has never been taken up, doubtless for two reasons. Everyone would feel that distinguished individualities would lose in personal dignity by becoming pegs on which to hang information about themselves, while those who came to greet them as familiar and honored friends would resent the offer of a table of facts about them as an intrusive annoyance.

The case is similar with works of fine art. These, too, are distinguished individualities—impersonal and immortal, it is true. A ticket or label does not honor, but rather humiliates them, and when they become familiar to us is a hindrance to friendly relations. The fact becomes evident on considering limiting cases. The words "St. Paul's Cathedral" carved on an architrave of that church or displayed in electric letters about its dome; the words "The Capitol" similarly placed on the structure in Washington would be generally thought to derogate from the unique dignity of those buildings; and most sightseers would doubtless resent the implication that they needed the information. Likewise, the labeling of museum treasures will be felt as a double impertinence in proportion as that acquaintance with its contents grows which every museum is founded to conserve and foster.

Fourth, it is fatiguing. Reading labels, far from being no trouble, is generally a severe exertion. It adds so greatly to the labor of a museum visit that those visitors who conscientiously attend to a few labels are apt thereafter to be capable of little more than passing glances at anything.

Fifth, it is unsatisfactory. The description, author, place, and time given in a label are for the most part little more than names to the visitor, often soon to be forgotten.

Sixth, it is atrophying to the perceptions. The easy satisfaction of the four uppermost questions about a museum object dulls interest in it and confirms the habitude of treating things made to be looked at as if they were made to be read about. This is greatly to the beholder's loss; for, as a jewel to its case, so is observing a work of art to reading about it.

Seventh, it is misleading. We often cannot tell the close truth on a label without making it impracticably cumbersome. A proportion are forced to perpetuate misinformation. Again, a label emphasizes

that part of the content of the object which is describable in words—its motive or use—to the exclusion of the rest of its content—always more important. As Burckhardt wrote: "Were it possible to give the fundamental idea or conception of a work of art in words at all, art would be superfluous and the work might have remained unbuilt, unchiselled and unpainted." The difficulty of directing the attention of a spectator to the fundamental idea of a work of art is known to all artists. Was it not Whistler who covered with paint some absorbing detail in a picture in order that his general purpose in its color and significance should not escape the eye? Of the novel of Madam Bovary, Flaubert is reported to have said: "People always harp on the *'cote vaudeville'* of the story, while all that I sought to create was *'quelque chose de gris'* "—meaning that any other plot and setting of the same melancholy tone would have served his purpose as well. The fault lay with the label of the tale, which indicated the fortunes of a woman as its principal interest. At the name St. George under the well-known statue the fancy loses itself in the Asian legend, forgetting the young soldier of the Florentine streets that Donatello transported from life to immortality. In a word, a label, while it may be a charming ornament to a work of art—witness the title "It Never Can Happen Again"—and a convenience to remember it by, always fails to express and generally tends to obscure its content.

These disadvantages suggest seeking substitutes for labels. A docent is the best, as has been said, but in general written information must suffice. The problem of the label, then, becomes that of connecting a given object with given written information otherwise than by affixing the writing to the object.

What are the possibilities of the case?

By "connecting the written information with the object" is meant making it possible and easy for the spectator of the object to find the writing referring to it. When the writing is a label, that is, when it is immediately juxtaposed with the object, the spectator cannot go astray; but when it is not on or near the object, he must in some way be directed to it.

1. A general description and location of the object will suffice and is often used in guidebooks. The words "In the Lady Chapel, the Altarpiece" will enable the sightseer to apply the added information "by Rubens, represents the martyrdom of St. Stephen" infallibly to the right object. But such a verbal link is always cumbrous, and becomes impracticably so in a museum.

2. A pictorial link is much more effective. The visitor may be provided with a page or pages of illustrations of what he is to see; and these pages may bear the appropriate information. But how connect the separate items each with its respective illustration? Either (a) by printing each thereon or thereunder, labeling, as it were, the illustration instead of the object; or (b) by printing the items together and the illustrations together and referring each member of one group to the proper member of the other group by a common and distinctive sign like a number, as in the printed keys that often accompany historical pictures.

The first alternative, that of information on or under an illustration, is open to none of the objections to which a similar item on or under an object is exposed. Being unrestricted in matter, it is not properly termed a label. This method has only its cumbrousness against it; and in spite of this has a wide application.

The second alternative, that of grouping the illustrations together and the items together and referring by numbers from one to the other group, has the advantage of compactness but pays for it by an increase in complexity. The chain of direction from the object to the information now possesses two links. In the earlier case the spectator was led from the object to the illustration by visual recognition and from the illustration to the information by their juxtaposition, the illustration being the single link. By the method of grouping he is led from the object to the illustration by visual recognition; from the illustration to a number by their juxtaposition in a group of plates, and from the number to the information by their juxtaposition in a group of texts. The illustration and the number are two links in the chain of direction.

Both these methods are applied in the hosts of books called treasuries or monuments of art which the late advances in processes of pictorial reproduction have brought forth. The illustrations may be faced by a related text or may be gathered together as numbered plates and referred to from the successive sections of a text, varying from a simple index to an elaborate series of disquisitions. But such treasuries are apt to be large volumes designed for the library and impossible to use as guides to the original objects they discuss. The method of attaching items of information to a series of illustrations has, nevertheless, been applied with success in the Handbook of this museum.

An evident simplification reduces the double chain of direction to one link again. Why use illustrations at all? Why not number the

objects themselves? Evidently in many cases, perhaps in all, this will be practicable. The process of finding the information appropriate to each then becomes a passage from object to number by juxtaposition in the gallery and from number to item by juxtaposition on the page. The label reappears in the form of a number. In this form the seven objections hardly apply. A number is generally available as a means of identification (1); is not conspicuously unsightly (2); and while it still retains a flavor of impertinence (3); it is not fatiguing to read (4), being simple in form; nor unsatisfying (5), being merely a reference; nor dulling to the perceptions (6), for it does not distract from the object; nor misleading (7), for it reveals nothing.

This last solution of the problem of the label may be called a gallery book. It consists essentially in grouping the information about exhibits into a numbered series of items, the exhibits being numbered to correspond. It is as if the labels of an exposition were gathered off the walls and out of the cases, replaced by numbers and put into book form under corresponding numbers. From another point of view the gallery book may be regarded as a democratisation of the customary catalog. Numbered lists corresponding to numbered objects are no longer offered for purchase to those who can pay, but for use to any who need them; with certain changes in method and form corresponding to this change in destination.

To the obvious objection that labels gathered from their secure position on the walls or in cases and put into the hands of the public will soon become defaced, if not illegible, the only rejoinder is a provision for their multiplication and renewal. This is the first requisite of the democratisation of the catalog. Lending catalogs, for such they will be, must be prepared in quantity and replaced when necessary.

The second requisite changes the form of the catalog by dividing it into independent sections each applying to one room only or even, it may be, to one case. Gathered into a single volume, a collection of items of information serves the purposes of one person only; separated into many sections, it may be used simultaneously by as many visitors. This is essential; for the second real objection to gallery books as substitutes for labels is that the information relating to the exhibits becomes thereby accessible to far fewer people. True; but it is practicable so to multiply the books in each gallery as to give one to each of as many visitors as ever would read the labels in a gallery simultaneously. In a great crowd but few either can or will do so.

Apart from these two demands the gallery book may be treated and made like a catalog. It is exempt from the limitations of space which make the label unsatisfactory and misleading, and with the four w's can combine any other information deemed appropriate.

Nevertheless, be it said in passing, the text of a gallery book will greatly differ, through its democratic and artistic purpose, from the text of most exhibition catalogs. These are customarily both aristocratic and non-artistic, addressed to the few concerned to know about art and not to the many demanding to know art itself. The scientific and personal gossip which is the staple of catalogs must give place in the gallery book, if this is to accomplish its task, to information more germane to the content of the objects listed.

The use of gallery books would demand the following special apparatus and the following routine:

A stock of consecutive numbers from one to a hundred or two, of different sizes, preferably in another shade of the same hue as the material on which they are printed, together with some means of fastening them on or near the objects; a stock of cheap binders not easily soiled and bulky enough not to be easily carried away; and a stock of pages cut to the same size. There would be a small percentage of loss of the books each year due to inadvertence or mischief. Those in use in this museum are of brown cover paper seven by eleven inches, and bear the name of the Museum and the words "Lending Copy. Not to be taken from the Gallery" printed in gold. The pages are typewritten, manifolded, and securely fastened in by eyelets. For a gallery of one hundred objects such books might be expected to cost fifteen cents apiece.

The routine of their management would consist of preparation, maintenance, and renewal.

The preparation of a gallery book involves, first, gathering together in numbered paragraphs data adapted to help the average visitor see each object in the gallery as the artist saw it. The exhibits are then numbered to correspond and the material manifolded in an edition of perhaps one hundred copies. A number, perhaps ten, of these are bound and placed in the gallery and the rest are stored.

The maintenance of the books would involve changing them to correspond to all changes of exhibition. The part of the officer in charge of the objects would be the same as in the case of a labeled gallery. Upon withdrawing an object he would designate the corresponding section in the book for cancellation, and on adding one

would prepare a section for insertion. Rearrangement within a gallery would involve no change in the books, the number following the object. The labor by which the maintenance of books exceeds the maintenance of labels would be purely clerical, consisting in cancelling entries indicated by the curator and adding others received from him. Any object added would be given the next higher number to the previous highest and its section would follow the others. The dropping out of cancelled sections would cause gaps in the consecutive series without interfering with the convenience of its use. The curator would further be called upon to decide when changes of exhibition demanded a fair copy of the gallery book and the manifolding of a new edition therefrom.

The periodical renewal of the book would again be a purely clerical labor: first, copying of changes from one of the edition withdrawn to each of the edition substituted; second, the assembly of the corrected pages into binders. The books would be in the care of the custodian of the gallery, whose duty it would be to report to the clerk when any were injured or carried away. The interval at which the rest should be renewed could only be determined by experience of the particular gallery and public.

Every museum official will be sensible of four benefits incidental to the substitution of gallery books for labels:

First, numbers are necessary on objects in any event, if a museum is to have catalogs. The democratisation of these in the form of gallery books obviates the need of lettering exhibits also in order to inform about them.

Second, as personal acknowledgments, placards naming the givers or lenders of objects will still need to be attached to them. In proportion as such placards usurp the place of labels, the acknowledgments they offer will gain in distinction. Visitors will moreover learn not to be distracted by them.

Third, there will be no forgotten labels misplaced, darkening by time or perpetuating uncorrected data. In a gallery book the information offered visitors about exhibits would be continually under the eye of employees. Its physical condition would be the responsibility of the custodian of the gallery, and its content would be brought immediately to the notice of the curator at least as often as the labor of copying changes suggested to the clerk to ask the question whether it was not time for a new list.

Fourth, the gallery books of the museum at any given moment would

constitute a complete catalog of its exhibits at that moment. The labor of providing this catalog would be accomplished in the course of installing objects, and the list would be kept up to date in the daily course of changes of exhibition. At any time the preparation of copy for a complete printed catalog of the collections of the museum would cost only the labor of supplementing a current set of the gallery books by a list of objects at that moment withdrawn from exhibition.

The reasons given and the experience cited strongly recommend gallery books. It may already be claimed that they are an essential auxiliary to any system of labeling. To what extent they may eventually be made the substitute for labels only experience can determine. The democratisation of the catalog is too new a device to permit of a judgment upon its ultimate sphere.

But whatever the future of labels in museums of art, it may be said with confidence that they will linger in a form radically different from that at present common. True labels—items of information addressed to a visitor to the objects they concern—may be said hardly yet to exist. The placards that pass at present for labels are often not addressed to a visitor—one who sees—at all; but to a student—one who imagines on the basis of a description. This fact is made evident by two chief faults of existing labels. These are apt to be made up, in greater or less measure, of matter which to a visitor is either self-evident or incomprehensible. The reason why a small marble figure feminine in form and dress is labeled "Statuette of a Woman"—although the diminutive size and female type are apparent to everyone who can read the words—is that this item of information was conceived as an entry in a list, the reader of which might not have the object before him and would need a general description.

Likewise, the reason why phrases such as "Sistrum bearer," and "Prix de Rome" appear in labels is that the writers had in mind readers of books—persons to whom the interpretation of such phrases would conveniently offer itself. As they now mostly exist, labels (so-called) are clippings from catalogs; at once redundant in the presence of objects and barren in the absence of contexts. To make of them an independent avenue of information about an object before the eyes they must be revised in accordance with the rule: *Put nothing in a label either evident without it or incomprehensible without further information; for it will fail to enlighten the public alike in offering what all able to read can see for themselves; and in offering what it demands special knowledge to understand.*

Judged by this rule a sorry minimum of *vis educatrix* would be revealed in many of the placards ostensibly illuminating the public regarding the exhibits of our museums of art. The label as it is is far more inferior to the gallery book in its instructive efficiency than the label as it might be. The needs of him who envisages the object are the forgotten criterion. True labels are therefore a function, as the mathematicians say, of the special public which each museum serves. Its level of intelligence and education determines what should be assumed evident to the visitor, or envisager, without words; and what incomprehensible without more words than placards should contain. Each museum of art must in future recognize as its own independent problem the content of whatever labels it chooses to retain.

The main outcome of the present study may be expressed as follows:

Posted numbers are a necessary evil in museums of art; labels an added encumbrance for the most part avoidable by the democratisation of the catalog, and for the rest demanding to be radically remodeled in the interest of him who looks at, not reads about, works of art.

Dr. Frederic A. Lucas (Brooklyn Institute Museums).—"Mr. President, I would like to say a few words on the subject of docent versus label. There can be no question that the docent service reaches all who seek information there. It is a great advantage. On the other hand the label is for the special benefit of the vast majority of people —those who come to a museum not in search of information, but whom you wish to inform and whose interest you wish to stimulate to know more about these subjects. The docent service can appeal to a comparatively small number. To that small number it appeals in the best possible manner. The label is always on duty and I cannot but think that Mr. Gilman has really libeled the label. (*Laughter.*) There is no reason why a label should not look well. There is no reason why it should not impart its information in a pleasing form, why it should not please the visitor, and impel him to seek further information from the museum library. Another thing is the expense of the docent. The same amount of time and money that will impart information to ten thousand people will also impart it in label form to a hundred thousand people. The docent can only be there when he is called for. The label is always present, always doing duty. I have brought a few samples of our labels to show how the label may be

made to fit the object. As Mr. Rowe has said since I came here, the best result would be not docent versus label but docent plus label, and I think Mr. Rowe is right. The docent is for those people who are directly in search of information. The label is for the vast majority of people who come into a museum primarily to be amused, and whose interest you wish to stimulate, whose moral support and whose financial support you wish to get, so I venture to put in a strong plea for the label." (*Applause.*)

The Association then adjourned for luncheon in the Museum of Fine Arts. After luncheon members were conveyed by automobiles to the Harvard Medical School and the Warren Anatomical Museum, the Arnold Arboretum, and through the park system to the Public Library.

SESSION OF TUESDAY, MAY 23

Evening

The evening session was called to order by President Skiff at the Boston Society of Natural History. The discussion of labels and labeling was then resumed. Dr. Holland demonstrated a series of labels prepared by Mr. Sydney Prentice for the Carnegie Museum.

Mr. Henry W. Kent (*Metropolitan Museum of Art*).—"Mr. President, I am often inclined to wonder whether the objection to the label that some of our museum officials find is not due to the fact that we do not make labels that are typographically good. I am speaking from the printer's point of view, not from the ethics of art, and typographically it seems that both in scientific and art museums the opportunity is great for making a good label. It seems to me that the attention of museum people has not been sufficiently called to the fact that there is a very wide difference typographically between good and bad labels and that the range of type might very well be studied more carefully in preparing labels. I think much of the objection to labels stated by Mr. Gilman is due to bad typographical appearance. A label may be printed so that it is a thing of beauty or art. Printing is one of the minor arts most certainly."

Mr. Benj. Ives Gilman (*Museum of Fine Arts*).—"I want to say just one word about Dr. Lucas' remarks as presented this morning on docent versus label. Certainly the suggestion of a different function was most apposite. The thing that I wanted was to get out in book form the written and spoken information. The idea of the gallery

books is to afford something which can be carried in the hand or left in the gallery, and which can contain much fuller information than any label. The connection between the gallery book and the object is brought about by a number. It is, of course, nothing but a form of catalog, but the novelty consists mainly in the fact that it is a temporary catalog, something that is very cheap and can be thrown away, and is supposed to be put together in some fashion which can be easily altered. We have ours typewritten. Other typewritten papers can be added and the materials changed in any way."

Mr. Henry L. Ward (Milwaukee Public Museum).—"Mr. President. The question of the label and the docent in some instances can hardly be put as an alternative from which one takes his choice, because the docent seems to me impossible under certain conditions. I have in mind the Milwaukee Museum, where on Sunday afternoons, in the space of three and one-half hours, we not infrequently have more than four thousand people. We have about thirty-eight thousand square feet of exhibition space and it would be utterly impossible for a docent to do anything with such a crowd of people, who are really jostling each other along so that it is quite impossible to walk. The docent idea is one that interests me much but of course it is perfectly plain that it cannot entirely take the place of the label under such conditions as I have described, and these must exist in many other museums."

Dr. Frederic A. Lucas (Brooklyn Institute Museums).—"Just a word about the printing of labels. I quite agree with Dr. Holland that in many instances the hand-written label is much handsomer, but there are other considerations which militate against it. I do not like to repeat what I have said, but I presume the greater part of the members present did not read the article which I published, by courtesy of Mr. Kent, on Museum Labels and Labeling.[1] We have printed in the last seven years in Brooklyn, besides other printing, twenty-one thousand labels, many of which were equal to a printed page of a book and many more to a quarter of a printed page. We are under the necessity of turning out a large number of legible labels in a short space of time. (Dr. Lucas here demonstrated an exhibit of labels used in the museums of the Brooklyn Institute.) The drawback to the leaf labels is that the visitor wants his information right off. He does not want to take the trouble to take up any work of reference. He steps up to an object and he wants to know what it is, where it

[1] For reprint of this article in full see pp. 91–101 of this volume.

comes from and what it is for. I think these, in ninety-nine cases out of a hundred, are the three questions that the visitor asks, and he wishes an answer to them at once.

"We have used besides labels, leaflets and books on the table, and also print on the labels references to books in the library so if the visitor wishes to pursue the topic further he may do so."

President Skiff.—"Are there any other members of the Association who desire to pursue this topic? There being none, I desire to state that we have given considerable attention to the very important subject of labeling in the Field Museum. We have given equal attention by experimentation of a most searching character to the colors of the interior of cases, and to the woods of which cases shall be made and the methods of manufacture, and for what it may be worth to the members of the Association, I desire to state that our experimentation and observation, carried on for years very carefully and without any particular regard to expense, has led us to the conclusion that black makes the best case, that wood makes the best case, that the black interior is the best background, that black is the best color for the label, and that aluminum silver type is the best general color scheme to be employed in ink. I am referring now to the natural science museum, and to the colors of minerals, birds, mammals, and plants. In the Field Museum we believe in a uniform standard both for the sake of economy and effect. We do not wish to weary the minds of our visitors with many colors and varied schemes. I simply make this statement in behalf of our institution."

Dr. Lucas.—"I do not like to contradict our President, but I may say that in the Brooklyn Museum we have taken a great deal of time, a great deal of trouble, and a great deal of pains to arrive at what is best in cases, backgrounds, and labels.

"I do not believe that any hard and fast law can be laid down in regard to the color of cases, the color of labels, or the color of backgrounds. We use in our invertebrate hall a green burlap background. Our wood is of necessity mahogany. We are committed to that. I do not like it, but it is the best we can do. For labels we use silver on green, using a type large enough to be legible. In the hall of vertebrates we use a buff burlap background with buff labels. In the Indian hall the cases are dark olive green and the background is buff. In the California Indian hall the background is a light gray, the cases are oak, stained olive, and most of the labels are buff. I think the character of the background—you will pardon me, Mr. President?—

will have to be adapted to the character of the exhibit, taking the background that will suit the majority of the specimens. My own experience has been that if you use silver on black, you have to use much larger type, and even then unless the background is black the exhibit is faulty. If the background is black the effect is apt to be *sub judice* and rather depressing."

President Skiff.—"I did not intend to become involved in this. (*Laughter.*) But, my dear Dr. Lucas, I am opposed to the harlequin in museums as I am to the harlequin in society. I believe in standards and I believe that the museum should be regarded in the perspective. How many colors would be demanded in a background, to say nothing of the labels, to bring out to the best advantage the multicolored plumage of birds? What would a hall, for instance, devoted to North American birds look like when you stand at one end of it, if you employed in the background the best color to bring out the plumage of each bird?

"I am offering simply the conclusion at which we have arrived in Chicago after long experiment. We have taken a series of twelve-foot cases of birds and painted the screens one color and allowed them to stand for six months; then painted them another color and allowed them to stand for three months; and so on. Then we have tried various colors on the shelves and have tested glass shelves, putting them at various angles with the light, and I state, not as a criticism of what anyone else has done, nor as an assumption that we have necessarily arrived at the correct solution, that we believe in the Field Museum, and when I say that I mean all the curators, assistant curators, artists, preparators, and the director, that the best average background for the installation of objects in natural science is black, a dead black. The glass shelf is better than any other shelf."

Dr. Lucas.—"I would not use any shelf."

President Skiff.—"You would have to use a shelf for wading birds."

Dr. Lucas.—"No."

President Skiff.—"What would you use?"

Dr. Lucas.—"A pedestal, and let that stand against the background."

President Skiff.—"You would screw in a perch in the background for a wader?"

Dr. Lucas.—"Come and see us, Mr. Chairman."

Dr. Holland (*Carnegie Museum*).—"Mr. President, I should like to take the floor again."

President Skiff.—"Will you pardon me a moment?"

Dr. Holland.—"Yes, sir."

President Skiff.—"I have nothing more to say on the subject of labels." (*Laughter.*)

Dr. Holland.—"I am much in the same position, but I wish to call attention to the fact that we have done a little thinking in Pittsburgh too. Conditions in that city are closely analogous to those in Chicago, and in fact in all large cities in regions where bituminous coal is used as a fuel. We realize, as I think they realize in London, for I have had a great deal of experience and correspondence in this matter with the authorities of the British Museum, that it is well, in choosing a background, to confine ourselves to those colors, I do not say that are black, but that are low in tone and do not manifest the inevitable accumulation of dust which takes place in cities located as London, Pittsburgh, and Chicago are. With the best arrangements that can be made, there is, sooner or later, a deposit of grime in the best constructed museum cases, and by having grays, or I prefer pale green grays for many objects, you secure a harmonious result. As for the case itself, I am wedded to mahogany. Metal can be used. We do use it, to some extent, but I think in a museum, wooden furniture, properly built and reinforced inside with steel frames reduced to a minimum, and finished in plate glass, has a far more dignified look than a lot of the junk they are turning out by patent processes in the metal factories that are bidding for our trade.

"As to color of label, I object decidedly to any fixed standard. I believe that some shade of yellow and gray and red in the interior is useful, but the black label, my dear Dr. Skiff, with the aluminum lettering upon it, which is acted upon by the sulphur in the atmosphere, disappears in six months or so."

President Skiff.—"I said I would not say anything further. (*Laughter and applause.*)

"Dr. Holland and Ladies and Gentlemen, I may be mistaken but I think we have had the black label with the aluminum type in use in one of our departments, botany, for five years without having to change a label. I have the impression that it was Dr. Millspaugh, curator of this department, who first suggested this character of label. As for the buff-colored label—why, in the early days of the Field Museum we had a committee of experienced museum people come to Chicago to help us determine upon the style of label to be used. We finally decided upon buff with black lettering. They all faded and turned white. The green label fades, the red in the type fades, everything

seems to disappear except—I do not like to be didactic about these matters—black and silver. Here I am again on this label question. I did not intend to say and I do not suppose I should say anything about it, but I cannot help expressing myself; I should be glad if it were possible for the members of the Association to come to Chicago and see what we have done with the black background, the black label, and the aluminum type. As you enter the halls you are not distracted by the multicolored surroundings of the objects which are to be exhibited. Instead you become easily aware of the exhibits, and the object, not the label or the background, attracts your attention. When you are in front of the object and wish to ascertain what it is the label is there and you can read it, but when you are at one side or at some distance you do not see it at all. I have nothing further to say with regard to labels!" (*Laughter and applause.*)

Mr. E. L. Morris (*Brooklyn Institute Museum*).—"Mr. President, may I be pardoned one outburst of enthusiasm in seconding Dr. Lucas' invitation to all of you who are doubtful as to this style of label? May I say in seconding, that you will not find in any case in the Brooklyn Museum all these different styles together. This frame might suggest that, but I do not think any of you thought as badly of it as that. I agree with President Skiff as to the feeling of peacefulness which one feels on going into the exhibition halls in the Field Museum. The labels are not visible until one wishes to read what is on them. We have had practically the same object in view in preparing our scheme. The label which lies horizontally in the table part of the case is a very different proposition from the label that stares at you from a vertical wall. The size must correspond to the distance that your eye naturally takes. I won't say more. Come to Brooklyn."

Mr. Benj. Ives Gilman (*Museum of Fine Arts*).—"Labels seem to be such a perpetual trouble, I should advise the Association to consider gallery books. They will save a lot of bother." (*Laughter.*)

The following paper was then read by Mr. Henry W. Kent, assistant secretary of the Metropolitan Museum of Art:

SOME BUSINESS METHODS IN THE METROPOLITAN MUSEUM OF ART

Under the constitution of the museum of which I shall speak, like other museums of its kind, no doubt, the action upon the bequest, gift, or purchase of objects of art is taken by the trustees sitting in com-

mittees and approved by the entire board. This necessitates a system of business in the executive offices which, with as little loss of time and energy as possible, shall be thorough and all-informing, if I may use this expression to mean the notification of a given action to all concerned—donor, vendor, curator, treasurer, registrar, photographer, sales department, and daily press. At just what point legitimate business methods become red tape has never been clearly defined, but doubtless a business house would place it where system ceases to show a profit. Surely neither such red tape nor slipshod unbusinesslike methods of administration should be tolerated in a museum any more than in a factory, although this is a point which does not seem to have been considered worthy of much attention heretofore, if we judge from the literature on the subject.

By some, a system, which in the telling may seem complicated, may be deemed unnecessary, but when it is remembered that in a large museum many different persons are affected by a single transaction, that the physical safety of the object is an important consideration in a building of long distances where many employees and visitors are coming and going, that thousands of objects are added in a year, and that hundreds of thousands of dollars are involved in these transactions, it will be seen that a careful and unvarying system must take the place of haphazard communications.

In the following statement I shall endeavor to explain a system which has been found to be necessary to meet the needs both of the executive offices and of those persons whose work is governed by the action of the trustees.

Gifts and bequests are usually offered by letter. This, when acknowledged by the secretary, is copied and sent to the chairman of the committee of the trustees concerned with the statement that the objects offered will be examined by the director and the curator in whose department they would be included if accepted, and that a report of their recommendations will be sent to him later. The donor or representative of an estate is informed that the gift or bequest will be acted upon by the trustees at their next meeting. Copies of the original letter are furnished to the director and the curator, who, after the object has been sent to the Museum, draw up their reports upon blank forms furnished by the secretary, which with other similar forms are sent to the chairman before the meeting of his committee.

If the object is accepted by the trustees upon the committee's recommendation, a suitable acknowledgment is sent to the donor.

Notification of this action is sent by the secretary to the curator and to the registrar, who will already have received the object, giving a temporary receipt for it. At the time of the receipt of the object, the registrar sends to the secretary a card called from its color "the blue card," upon which he notes as much information concerning the thing itself as has come under his observation. The return of this card, filled in with additional data furnished by the curator, serves as his notification of the trustees' action. The registrar then accessions the object in a volume which follows in its general arrangement the accession book perfected by libraries. The use of this kind of record, by the way, is rapidly being discontinued by the libraries that first adopted it and it is questionable whether the time spent upon it in museums is not unnecessary. The registrar numbers the accession, his numbers running consecutively under the numeral indicating the year, and sends it to the photographer along with the blue card, keeping a copy for himself. Thus the blue card becomes what express companies call a "tracer." The object is photographed in as many sizes as the importance of the subject, the needs of the sales department, and the demands of registration and cataloging may require. When the photographs are made, the negative is registered by the photographer, the number of it being added to the blue card along with a print four by five inches which is pasted on the back, and both object and card are then returned to the registrar. The card is then filed in the order of the accession book entry, the record being now completed by the photograph, and the object itself is delivered to the curator, who, receipting for it, thenceforth becomes responsible for its safe-keeping and its display.

The system connected with purchases is somewhat more complicated since objects of this sort are of two kinds, those which are offered unsolicited and those which are brought to the attention of the trustees by the curators who desire their purchase. All objects offered for purchase are passed upon by the curator and the director, each of whom gives his recommendations on a blank form prepared in the secretary's office from information supplied from the vendor's letter or by the registrar, if the object is sent to the Museum on approval. Few of these unsolicited objects, however, are brought to the attention of the committee on purchases, because they are usually undesirable. In the course of a month, fifty such letters on the average, are acted upon without recourse to the committee. The objects recommended for purchase by the curators and the director are brought to

the committee by the secretary, who after the meeting indicates to curator, registrar, and treasurer what action has been taken. The system of notification for the first two officers is the same as for gifts. To the last officer, a card is sent giving facts connected with the purchase, such as the price to be paid, and the fund out of which it is to be paid. This card with others of its kind, arranged by classes, serves as the treasurer's voucher and aids him in making the correct entry in his books. The card remains in his office as an index to his ledgers.

While the blue card of accepted objects is still in the secretary's office, its information is rearranged on a white card—so much of it, at least, as is needed—and this is submitted to the curator for his emendations and corrections, when it becomes a catalog entry for the new accession. Classed according to a system of classification, and with a photograph of the object pasted upon its verso, it is filed in a general catalog. Copies of this card are given to the curator of the department to which the object belongs, who in this way secures a catalog of his own collections. From this card is made the "copy" used by the printer in making labels.

The usefulness of the blue card is not confined to the service which has been described. Unlike the proverbial rolling stone which gathered nothing in its career, the blue card accumulates data as it travels from department to department. Besides what has been enumerated, it furnishes information to the photographer for his records and to the sales department for its catalog and labels. It gives to the *Bulletin* its lists of monthly accessions, and to the annual report its long list of the year's acquisitions.

An account of this system is given here not because it is considered a perfect one, but in the hope that it may be suggestive to other museums and, also, in order that it may provoke such criticism as may be helpful in its perfection. It is written down in order that it may serve as a record for any new museum about to grapple with the problems of organization.

President Skiff.—"Thanking Mr. Kent for his very interesting paper, the President desires to state that the next contribution to the session is a paper by Mr. E. L. Morris, curator of natural science, Brooklyn Institute Museum."

MUSEUM CATALOGS

Probably every museum curator in any way responsible for the disposition of museum material recognizes that some form of record is essential for his own information, or for the inquirer. This information may be needed, soon or late, after the presumably permanent disposition of the specimen in question. The simplest method of arranging any record, as far as individual specimens are concerned, is that based on the A-B-C's which we all know, even if we do not remember, as the basis of our first education. When however, the data of importance and interest from the museum point of view is the same for several or many specimens received at the same time, the sole use of the alphabetic record is immediately burdensome by the numerous repetitions of the selfsame facts. It is true there are museums where no records of material are kept. They are usually museums of small capacity and limited staff, and it may be that the majority of these would keep catalogs were it not a question of actual time or available money. Occasional large museums adopt the position of exchanging, loaning, and giving no material whatever, and allow study by handling only under strict supervision. Some of these claim there is no need for any catalog record, and keep none. There are other museums, and these more often limited to some narrow specialty, where cataloging the specimen is so intricate and complex with cards of cross reference that a stranger relying on his own ingenuity, from force of circumstances, would be as totally lost as if dropped in the middle of the Everglades. Of this second extreme of museum cataloging I have in mind a certain government bureau where forty-eight colors of cards are combined with forty-eight colors of guides and each color of guide and its following cards modified in its distinct value by the size or position, or both, of the tab on the guide, and these complexities are again made more involved in cross referencing by the use of different colored inks for the records made upon guides and cards. The chief of this bureau and his immediate staff of helpers have grown up in the system and during their lifetime undoubtedly have become more at home in the use of this kaleidoscopic method than they would be in the use of any other system. But will it fit your needs?

A reasonable compromise appears to sustain its value and advisability in this as in most other problems of life, and, as the result of observation and experience of several people in making and using catalogs for extremely variant kinds of material, it is my privilege to

offer to this Association the suggestion of the following system which, from the point of view of the museum curator, the visiting teacher, or the interested specialist, seems to afford an easy access to any data desired as far as such data is physically available. This system is planned on the basis of permanent and continuous growth from any beginning, no matter how small.

Whether or not the museum be one of specialties, or one of general character, its exhibits and study series are bound to present many variations in the kind and quality of material acquired. The museum as a whole, under the suggested system, may have a record which is so complete that its entire list of acquisitions is available to its head officer, or its trustees, or to other museums' officers, who wish to compare progress between their neighbors and themselves. This has led to our adoption of a General Museum Accession Record (A). Each lot of material of whatever nature and however unlike, but having the same data of source, date of receipt, and condition of acquisition such as gift, or purchase, or loan, etc., receives a number, of course the next unoccupied in such a record. This record is made from accession blanks which may be filled by the chief officer, by the head of any department, or by any subordinate member of the staff authorized to determine the availability of the material for the use of his museum. These sheets, after the copying of the data in the general accession record, may then be disposed according to the judgment of the chief officer. In our own museum each such sheet goes to the curator interested in the largest number of specimens received. Sometimes these accessions are very complex in material, including such divergent objects as paintings, excavated archeological material, objects of zoological or historical interest, and material more strictly related to the science of ethnology. A cross reference card catalog of this record is maintained for the chief officer.

The further record of such material coming within the jurisdiction of the museum then receives record in the especial department to which it naturally belongs. The Museum Catalog (B), here made use of, consists of a numerical list, say of mammals, or fishes, or insects, or of Indian, or Esquimo, or Australian relics, or paintings, or porcelains, or figurines, as the curator in charge of the general department may find it convenient for himself and his helpers to classify. In this numerical record each successive number is assigned to an individual specimen, or clutch of progeny, or to pieces of headgear, or fragments of excavated pottery, or whatever may form a natural

unit for each record. The catalog has the advantage of uniform arrangement of data of objects as shown on the accompanying chart, which is that of the standard museum accession book of the Library Bureau.

This numerical catalog is balanced by a card catalog in duplicate, each card record standing for a successive number in the numerical catalog. The two cards in duplicate contain all data available as outlined in the general museum accession record, and as detailed in the departmental museum catalog, there augmented by copy of field note or tag, or any original fact or reference accompanying the specimen. Of this duplicate card record one set is arranged alphabetically by the most widely known names, or by the special terms most likely to be used by the dictionary user. The second is arranged systematically according to the broadest and latest monographs available on the subject or group. In either the alphabetic or systematic arrangement of cards, cross reference cards, headed by common names or local terms, or otherwise descriptive phrases, may be interpolated at the convenience, opportunity, or judgment of the officer in charge.

There are certain advantages in this threefold record of any class of museum material. The numerical record, more or less fully held in memory by the curator in charge, may be in use at the time of necessary consultation, and each card catalog sequence is then available. Accidents sometimes happen and, if there is but one record, may entail great inconvenience, or even irreparable injury to the best conduct of the museum activity. Such accident to any one of the forms of record, numerical, alphabetic, or systematic is readily remediable by a temporary rearrangement of either other set from which an immediate copy may be made. It would be, indeed, a dire catastrophe under which all three arrangements of data were injured or destroyed. The specialist would consult, in most cases, the systematic card list for refreshing his mind as to the desired facts. The visiting school teacher who, in most cases, would not be a specialist, would use most naturally the alphabetic catalog. The man especially interested in the history of museum growth and development might obtain more information and wider judgment by consulting the numerical list. The three lists constitute the available record, simple or complex, at the same time a brief one, and at the same time one readily interchangeable if occasion requires.

In connection with the card catalog arrangement of data, special

forms sometimes lead to a sort of shorthand or photographic record for the eye of a series of facts which prepared singly might entail the examination of numerous cards. Examples of useful short cuts in card cataloging are herewith presented for free adoption by any who see their advantage, or for modification as the individual needs of this or that curator or department may suggest.

Dr. W. J. Holland (*Carnegie Museum*).—"It seems to me that the last two speakers have not given sufficient attention to the tendency to increase the complexity in records. The simplest record that can be devised to hold securely the information that must be preserved is the system that will ultimately commend itself. When an object is received at the Carnegie Museum it is examined and all the information we have is entered on an accession card. From these cards the list of our accessions is obtained for publication in the annual report. Specimens are then distributed to the curators of the several departments, who are expected to prepare a complete index of their collections in a book in which they are entered under consecutive numbers. There is also a set of cards containing the same data and arranged alphabetically. It seems to me that this is substantially the system in use in Brooklyn. It involves the least labor in its preparation and yet yields absolute certainty of information."

The following paper by Mr. Charles Louis Pollard, curator-in-chief, Museum of the Staten Island Association of Arts and Sciences, was then read, in the absence of the author, by Miss Agnes L. Pollard:

DOUBLE CARD ENTRY MUSEUM CATALOG

A specimen catalog, in some form, is recognized as an indispensable adjunct of every well regulated museum. The systems in actual use are almost as numerous as the proverbial sands of the sea, for it seems almost impossible to secure uniformity in cataloging methods when every institution is apt to have certain special requirements. It seems to be generally agreed, however, that whatever system is adopted should be accurate and comprehensive, but not too complex. There is little value in a catalog that involves the consultation of a series of keys before the information sought can be extracted. Moreover, it must be capable of indefinite expansion and must avoid numerical confusion Above all, it should stand as an index of the actual contents of the museum. The practice that sometimes obtains of giv-

ing a museum catalog number to every specimen received, even though the specimen is worthless or may be exchanged at once, is, in my opinion, both unnecessary and unwise. The proper museum record for such material is in the museum accession book; and before describing the catalog system in use in the museum of the Staten Island Association of Arts and Sciences, it may be well to comment briefly on the uses of this book.

If we compare the card entry catalog to a ledger, the accession record may be regarded as a journal, or book of original entry. As its name implies, it is a list, not of specimens, but of accessions. There is much greater uniformity among museums in their treatment of accessions than in their catalog systems. The general practice is to give a number to each lot received, whether it includes one or one hundred examples, and whether they are objects of one kind or of varied character. The date, name and address of donor, of collector when known; a statement if gift, loan, or exchange; and an indication of the disposal are then usually entered in columns provided for the purpose. The accession number is then attached to each specimen, and the material may await a convenient time for cataloging, or may even be distributed into the study or exhibition series without danger of confusion. At this stage, in our own museum, all duplicates or valueless specimens are separated before the accession passes into the hands of the cataloger. It is not deemed necessary to specify the number thus removed, as the museum catalog shows the number retained, which is the fact of importance.

We have a series of cards in colors, one for each department of the museum. Thus, salmon is used for zoology, green for botany, blue for geology and mineralogy, yellow for archeology, and buff for arts and antiquities. Each of these departments has its own series of numbers, prefixed by the initial letter of the subject. There is no danger of confusion between two similar numbers, either as to the cards or the specimens, B 500, for example, would be on a green card, and G 500 on a blue card; while the specimens themselves would obviously indicate to what department they belong, irrespective of the letters prefixed. The highest serial number in any department will therefore always indicate the total number of specimens in the museum, on the assumption that none have been withdrawn or destroyed. The method of dealing with these will be explained below.

When any object, an insect for example, is to be cataloged, a label is attached to the specimen bearing the next serial number in zoology,

as shown by the cards, which are always kept in numerical sequence. On the card bearing this number is typewritten, first, the name (if known), the sex, name of collector, date of collection, locality, and the source whence it was received by the museum. At the bottom is given the accession number. If, therefore, further information is desired about the lot in which this insect was included, a reference to the accession book supplies it. The card is then returned to its place. As it is often impossible to give full and satisfactory data on the labels attached to the specimens, we endeavor to make cards as complete as possible.

The numerical catalog thus forms one branch of the double entry system. It will be observed that it is an index to specimens, but not to species. It is often desirable to ascertain just what the museum possesses of a given species or a given class of objects. This need is met by a parallel catalog composed of white cards. On each of these is written the name of a species, if in biology; of a mineral, in geology; of an object of manufacture in the other classes. To continue the example of our insect, which we will suppose is *Anosia plexippus*, the milkweed butterfly. On the white card bearing this species name is written the catalog number of every specimen in the collection, as Z 500, Z 1020, Z 2348. This shows that we have three specimens, information concerning which can be obtained by consulting the numbers in the other catalog. A statement of locality is added after each number. These white cards are arranged in one general alphabetic series, for convenience of reference.

When a specimen already cataloged is destroyed or given away, a statement of its disposition is written on the card belonging to it, and the number remains unchanged, as the chronological sequence would be destroyed if it were again used. These cards are left in the numerical series, but are punched to make them conspicuous, and when a statement of the total number of specimens in any department is desired, it is a simple matter to run over the drawer, counting only the punched cards, and subtracting this number from the total as indicated by the highest number.

The double entry system thus obtained has been used in the Staten Island Museum since its inception, three years ago. We shall doubtless find occasion to modify it in some minor details, as no system can be perfected in a short period. It has thus far satisfied all requirements, however, and certainly possesses the merit of simplicity as compared with some of the more cumbrous book catalogs.

Dr. V. Sterki, assistant in conchology in the Carnegie Museum, then reverted to the catalog system of the Carnegie Museum as described by Dr. Holland. He spoke particularly of the problems of the curator who deals with several hundred specimens of a single species, as for example the mollusks, and advocated the use of a book in which several pages might be devoted to annotations and cross references in such a manner as to be more conveniently accessible than where the card system is used. Dr. Holland spoke of the great value of such a record as that kept by Dr. Sterki, but he did not consider it possible with the resources at the command of American museums to catalog all departments in such great detail.

President Skiff.—"I do not know how valuable a contribution it would be to have knowledge of the systems in use in other museums, but in the Field Museum we have a recorder whose office is a branch of the director's office, who keeps all records concerning the corporation as a business institution—financial transactions, investments, and inventory, to use commercial terms. He also keeps the accession records of the Museum in the form of historical entry books and jackets in which all the original papers are recorded and preserved, e.g., if it is an expedition, its cost and the list of materials collected; if it is an importation, the custom house papers; if it is a purchase, the invoice of the vendor. Each accession is entered in these historical files under a general departmental number. We have four departments in the Museum, viz., anthropology, botany, geology, and zoology, and the director has to do only with the four individuals in charge of these departments. Each department has its various divisions and subdivisions. It also has its own accession files, which are of no value whatever as books of original entry, but are correlated with the books of the recorder by the accession number. In these departmental files are recorded the scientific data, such as the history of the expedition, the notes of the men in the field, and information affecting the scientific value of the object or likely to be useful for answering inquiries, for lecture purposes, etc. Thus all the business history of an accession is contained in the books of the recorder, while the scientific history belongs to the department itself. We have found this system to work out very well and have lost trace of very few out of a great many objects, and seldom lack the basis for any information that we desire to gather."

Mr. H. E. Sargent, director of the Kent Scientific Museum, Grand Rapids, then spoke briefly of the loose leaf record system in use in his

museum. In response to a question by Mr. H. H. Brimley, curator of the North Carolina State Museum, Dr. Skiff stated that in the Field Museum the exhibition and systematic collections were strongly differentiated and that the exhibition groups are for the most part duplicates of specimens in the systematic collections and for this reason do not require special care in numbering. If, however, a specimen of scientific value should be included in a group it would have its number securely attached in some inconspicuous manner. To make these easy of detection maps or pictures of the group are used in which the numbers of the specimens are shown. A paper on "Geographical Cataloging System" was then read by Mr. A. H. Cooper-Prichard, librarian of the American Numismatic Society, New York City.

The session was then adjourned until the following morning.

SESSION OF WEDNESDAY, MAY 24

Morning

The Association assembled at 10 a.m., at the Fogg Art Museum in Cambridge, President Skiff presiding.

Dr. Arthur Fairbanks, chairman of a special committee appointed to prepare memorials to deceased members, reported the following resolutions, after which members of the committee made individual reports as given below regarding the deceased members:

Resolved, That the American Association of Museums desires to place on record its sense of loss in the death during the past year of three distinguished members, Sir Caspar Purdon Clarke, until recently director of the Metropolitan Museum of Art in New York, Halsey Cooley Ives, director of the City Art Museum of St. Louis, and Arthur Erwin Brown, curator of the Academy of Natural Sciences in Philadelphia.

Resolved, That the Secretary is instructed to convey to the families of our deceased colleagues, the expression of our sincere sympathy in their bereavement.

Resolved, That the American Association of Museums expresses its sincere sympathy with Prof. Edward S. Morse in view of the sudden and severe bereavement which has befallen him in the death of Mrs. Morse.

Dr. Arthur Fairbanks (*Museum of Fine Arts*).—"My acquaintance with Sir Purdon Clarke was brief, and in reality the memorial to his services should be regarded, I suppose, as given in the address of his successor yesterday, and Mr. Robinson made clear what the great work was that Sir Caspar accomplished for the Museum in New York.

"He was not an old man. He was born in London in 1846. He was trained in the National Arts City Training School of the South Kensington Museum, the scene of his after labors. His own special work seems to have been architectural, but even in his architectural work he found opportunity to collect works of art, to arrange collections of art, and to build occasionally a pavilion or some other structure which was designed to contain exhibitions of works of art. As early as 1876, when he was thirty years old, he made a trip to Greece to collect for the South Kensington Museum; a couple of years later he went to India and it was there, or from that center, rather, that he became particularly interested in the work of collecting for museums of art, and continued his relations with India with brief breaks. In 1879 he was collecting in Spain and Germany for the South Kensington Museum. In 1883 he found his permanent position at the South Kensington Museum as keeper of the Indian collection. In 1893 he was made assistant director and in 1896 director. It was during those years from 1893, when he first obtained his official position there, to 1905, when he left, that the South Kensington made its remarkable progress, adding to and increasing its enormous collection. Sir Purdon Clarke was primarily a collector and the monument to his work in England consists of those very large collections. During this time of the government appointment, he was a member of various societies.

"In 1905, as was told yesterday, he was asked to become director of the Metropolitan Museum of Art in New York. The five years of his service there were somewhat broken by ill health, and some months before his death he was obliged to lay down his work, although he did not cease his official connection with the Museum until the time of his death. He was at that time honorary adviser of the Museum with reference to purchases in Europe.

"It was said of Sir Purdon by those who intended it to be a criticism, that any old woman who came into the Metropolitan Museum and asked for him found a ready audience with him, and he gave a whole hour, a whole day, if she asked it. It was intended as a criticism, but it is a striking example of that quality by means of which

Sir Purdon actually revolutionized the work of the Metropolitan Museum in New York, and the attitude of the people in New York toward the Museum.

"Up to the time he became director, it was regarded that in the future the public might come in and look at some paintings or other objects, but they were rather regarded and thought themselves intruders. The change was revolutionary. The collections not only were organized, as was told to us yesterday, but were given to the public practically for the first time during the directorship of Sir Purdon Clarke. It seems to me that no greater honor could be paid to a man than this, that these immensely valuable collections not only increased, but that they have really for the first time been made known and easily accessible to the public of the city to which they have been given."

Mr. Wm. M. R. French (Art Institute of Chicago).—"Mr. President, I would like to speak a word with regard to Professor Ives, as we always called him, although we gave him the title of Dr. Ives near the end of his life.

"Halsey Cooley Ives was born in the same year as Sir Caspar Purdon Clarke, 1846, in Glen Falls, New York. He was the oldest in point of service of the art museum men of America, and I believe I am next. It is now something more than thirty years since my association with him began. We were then young.

"I have gathered that he was in the Union service in the civil war, not as an enlisted man, but in connection with the engineering department, and that he received a wound from which he suffered long after. He went to Europe and studied in the South Kensington Art School in London. It may be presumed that it was there that he acquired that appreciation of the value of the industrial applications of art that was almost a dominant element in his career. Later he found himself established as a teacher of drawing in the mechanical and architectural departments of Washington University in St. Louis.

"An ordinary man would have plodded along and performed his professional duties and remained a simple drawing master. But such were the expansive ideas, the personal address, and the practical abilities of the young teacher that in a few years his department was of acknowledged importance; he was a full professor, a museum of art had been built, and a large school of painting and sculpture had been established. Of course, there were others co-operating in this, but it is safe to say that it would not have come about without the enthusiasm and devotion of Professor Ives.

"All this happened before our Chicago museum was even incorporated, and before there was an art museum in any western city except Cincinnati. It was at this point, about 1879, when we were just beginning, that I visited Professor Ives and saw a fully established art museum and school. Through the subsequent years I had occasion to appeal to him over and over.

"Our friend's life has illustrated what may be accomplished by single-minded devotion to a definite object. I do not say that a man is always worthy of great credit for being interested even in a good and useful thing. There are all kinds of tastes. Some of us are attracted to art and pursue it, not so much, perhaps, for the benefit of our fellowmen and in a spirit of self-sacrifice as because it pleases and attracts us. But I have always thought those men happy whose tastes are such that the exercise of them may be a public service, whose spontaneous activities add to the well-being of the community.

"As far as we can discern, if he had never lived in St. Louis the Museum would hardly exist, the art movement there would have been halting and slow, thousands would have missed the inspiration of his teaching and enthusiasm; it is doubtful if the city would now be taking its proper place in the world of art.

"The great artists make themselves remembered by these visible works in color and in marble, but the officers of museums must be content to be built into the foundations of their institutions.

"I have just attended the memorial service held last Sunday afternoon in front of the Art Museum in St. Louis. The weather was beautiful and the service was impressive and appropriate. It was eminently fitting that it should be a popular assembly rather than a meeting of the Society of Arts, because it was the art of every day that chiefly interested Ives. He really gave his life to encourage the education of the masses in art, and thought every mechanic should be instructed so that he could make his own designs. He wished to bring about the union of the art of production with the art of design. So, in front of his museum, where he had made a collection not only of sculpture and paintings but of applications of art to every kind of thing—textiles, bookbinding, iron, ivory, and gold—there assembled a multitude of people, with the mayor and other authorities of the city and the officers of the art museum, to hold a memorial service while the funeral rites were being performed in New York.

"I am glad to say these few words in regard to my friend." (*Applause.*)

Mr. Benj. Ives Gilman (*Museum of Fine Arts*).—"Mr. President, there are those here who saw Mr. Ives oftener than I. I met him but twice, and I simply want others of the Association to know that in those two meetings he made a very profound impression upon me. He was a whole-souled and large-hearted man, a true friend of the people. His scientific attainments were such that all America should take pride in what he accomplished."

Dr. W. J. Holland (*Carnegie Museum*).—"One of those taken from our number this last year is Dr. Arthur Erwin Brown, of Philadelphia. As one who knew him for a long time, as one loving and honoring him for his attainments and for the many graces of character which he possessed, I desire to take this opportunity to pay my tribute to his memory.

"Dr. Brown was best known in the domain of zoological research. He was vice-president of the Academy of Natural Sciences of Philadelphia, one of the oldest and most venerable institutions of learning in this country. He was, at the time of his death, director of the Zoological Gardens of Philadelphia, to the creation and maintenance of which he had devoted himself during almost the entire life of that institution. You will recall that Dr. Brown was one of our hosts and personal guides at the meeting of this Association in Philadelphia. Many of us visited the Zoological Gardens and we will never forget that although he was not very well at the time, in fact, had been in a somewhat failing condition of health for a number of years, he went about that rather extensive domain, pointing out in his animated and interesting way the objects worthy of attention.

"In Dr. Brown, science in America has lost an eminent devotee, and this Association has lost a good friend." (*Applause.*)

The report of the committee on necrology was then approved by a rising vote.

The Association then proceeded to the election of officers with the following result:

President:

Edward S. Morse, Director, Peabody Museum, Salem, Mass.

Vice-president:

Henry L. Ward, Director, Public Museum of the City of Milwaukee, Milwaukee, Wis.

Second Vice-president:

Benj. Ives Gilman, Secretary, Museum of Fine Arts, Boston, Mass.

Secretary:

Paul M. Rea, Director, The Charleston Museum, Charleston, South Carolina.

Assistant Secretary:

Laura L. Weeks, Secretary to the Director, The Charleston Museum, Charleston, S. C.

Treasurer:

W. P. Wilson, Director, The Philadelphia Museums, Philadelphia, Pa.

Councillors, 1911–1914:

Frederick J. V. Skiff, Director, Field Museum of Natural History, Chicago, Ill.

Henry W. Kent, Assistant Secretary, Metropolitan Museum of Art, New York City.

At the request of the President, Mr. Ward here took the chair.

President Skiff.—"I have the pleasure of introducing First Vice-president Ward. (*Applause.*) I desire on this occasion very briefly to express to my colleagues among the museums of this country, and to my associates and fellow members of this organization my sincere appreciation of the honor you have conferred upon me by asking me to act as your president for the past year. I assure you I regard it as a distinction. I have felt a deeper interest in the welfare of this Association than circumstances have permitted me to manifest, for, as it happens, I was called out of the country at the time of the fourth annual meeting of the organization, but I have done at other times and in other ways such things as I was able, with much satisfaction, and while retiring from this important administrative office I hope that I may continue to serve in the ranks for the welfare, the progress, and the growth of this splendid organization." (*Great applause.*)

After extending a welcome to the Association, Mr. Edward W. Forbes, director of the Fogg Art Museum, Cambridge, presented the following paper:

THE RELATION OF THE ART MUSEUM TO A UNIVERSITY

My subject is "The relation of the art museum to a university." In this discussion I shall use as my principal illustration the relation between Harvard University, the Fogg Museum, and the Boston

Museum. You will observe that our conditions here are peculiar. As a rule, the great colleges, Yale and Princeton for instance, are not near a large city with an important museum. On the other hand, most of the large cities in the country have no large university using the city art museum. For instance, Columbia, I believe, has no intimate connection with the Metropolitan Museum. Here we have a great university with a growing fine arts department; we have a small university art museum, which might be called our laboratory; we have the Boston Museum and the Boston Public Library near by. So it may easily be that some of the problems which may best be solved in one way by us will be worked out better in another way in other places.

The relation of an art museum to a university is more complicated than appears at first sight, because the study of art is in many ways less easy to manage than the other studies in the university course. In history, literature, foreign languages, mathematics, and philosophy, books, documents, and men are all that are necessary; in chemistry and physics—laboratories; in botany and forestry—flowers and trees. But in fine arts, even granting the possession of a museum as expensively built as a scientific laboratory, a very intricate question arises—how shall it be filled and what shall be the purpose of its activities? The problem has some of the same difficulties that the problem of the geologist has, in that the great works to be studied are not accessible in themselves, and the effort must be made to make them interesting and real to the student by means of reproductions, or of smaller and less important specimens of the same kind. Probably few universities have ever felt justified in spending their funds for the purchase of objects of art. Usually, as in the case of Harvard, the works of art, and also the museums which hold them, have come as gifts.

Art, like most other studies, can be approached from the practical side or from the theoretical. As a rule, the college course is taken from the theoretical side. The student is taught the history of art in terms of words, but he does not take the charcoal and the brush himself. A man can learn something about the theory of riding, of football, of swimming, or of music by hearing lectures on the subject; but the men whose opinions are really valuable on those subjects are men who have practised them, and not merely read about them.

Is this so in the case of art? In art we are confronted by the fact that there is involved the creative faculty and the critical faculty. It seldom happens that a man has both powers developed in a high degree. The man who has the critical faculty in large measure is not

likely to be a creative genius. The man who has the power to conceive and execute great works of art must be satisfied with a weaker critical sense, for he has a greater gift.

Broadly speaking, the art school is the place for the man who is to paint—the university is the place for the man who is to learn to criticise and write on art. We must remember, too, that the average undergraduate student of fine arts does not propose either to paint or to criticise. His object is to get an intelligent appreciation of the subject for the purposes of general culture, but in this discussion I will rank this latter class with the critics. The object is largely the same; the difference is a matter of degree. The critic is the professional, the man of general culture is the amateur. But even the man who is to criticise should know how to paint. Or to put it more bluntly, he should know what he is talking about, just as the man who undertakes to know about swimming should be able to swim. No one but a trained engineer would pick an engine to pieces. The same principle holds in everything. The man who knows best what the difficulties are, understands best the skill of the master who overcomes them. The world has too many young critics who must earn their bread and butter by making a sensation. Much chaff is foisted into the literature of criticism by these immature experimenters. Kipling lashed them with reason in his lines:

> When the oldest colors have faded
> And the youngest critics have died.

Copying has the effect of forcing intense concentration on the work of art. I know an artist who said he sat and looked at a picture in Sienna day after day with such intentness that he felt sure he knew more about that picture than any one ever had known before. At last after studying it for several days he began to copy a detail and at once discovered that he had known nothing about the picture before. He learned a hundred things when he started to try to do it himself that he had not dreamed of as he merely gazed at the picture. There are critics who say that a superficial knowledge of drawing is a positive injury to an art critic's eye. But this is apt to be the armor worn by those who cannot draw themselves.

The art student whose purpose is to learn to paint finds that he needs seven or eight hours a day of painting; and I fear that too few of the regular art school students get much from their training beyond accuracy of eye and skill of hand. Most of them know little about

the history and philosophy of art, the technique of the great schools of painting, the theory of color and of design, or the chemistry of painting; and above all they are apt to understand little of what makes art valuable, and of its relation to life. The college student, on the other hand, knows many of these aspects; but it is hopeless for him to think of spending eight hours a day on drawing alone, and even one and a half hours a day of drawing, that is, nine hours a week, seems enormous to the undergraduate.

Therefore, the problem appears to be—how can a university fine arts museum be most useful under these conditions? The first obvious need for the purpose of teaching the history of art is a collection of slides and photographs. By means of these the lecturers can illustrate the history of art. In gathering a suitable collection of photographs the labor involved is great, particularly in a university like Harvard, where courses are given on a large variety of subjects and where, as time goes on, a larger and larger variety of courses will be given. The Fogg Museum now has about forty-three thousand photographs, but these are spread over the fields of architecture, ancient, medieval, and modern; of sculpture, including Egyptian, Greek, Italian, French, and German; and of the painting of many lands and centuries. I know a private collector in New York who has fifty thousand photographs of Italian paintings of the fourteenth, fifteenth, and sixteenth centuries alone. So it is clear that our collection can hardly be called complete.

The problem is complicated still further by the different sizes of photographs. We have a small number of splendid great photographs of paintings, or details of paintings. They are very useful to the student who wishes to study the brush work of the masters. We have a number of large silver prints and carbons, but most of our collection of photographs are of the ordinary eight by ten size. It is often an economy to buy a book with two or three hundred illustrations for three or four dollars. If we should buy a set of photographs of these same subjects, it might easily cost us thirty or forty dollars. Picture post cards costing one or two cents apiece will often serve the student in studying the composition or the type of a picture. But of course the possession of all these different kinds of reproductions of pictures makes the cataloging of them and the work of the student more laborious than as if we had silver prints of but one size.

Our slide collection, numbering five thousand, is much smaller. The lecturer can pick out from the mass of photographs the few most

significant ones to have made into slides for his lectures, while the student wants the greater wealth of material in the form of photographs which he can study at his leisure.

There is a difference of opinion about the value of casts. Many authorities say that an ancient statue can be studied better from a photograph than from a cast. The Hermes of Praxiteles, for instance, as seen in a photograph is a beautiful object. The texture of the marble can be in part felt, and one can almost see the translucence, whereas the cast is a staring white unsightly object to the eyes of many. On the other hand, the cast has certain obvious advantages over the photograph. The photograph tells one story well, the cast tells many stories less well. We have a collection of casts which proves useful in the courses on sculpture. The architectural students work at Robinson Hall nearby, where there are casts of architectural details as well as some original fragments. We have also other galvanoplastic and electrotype reproductions of the smaller classical antiquities.

We have a small library attached to the Fogg Museum, and some of the most important art periodicals come to us regularly. Our students, however, have to depend for books largely on the college library.

Such is our equipment in the way of reproductions and historical and literary material. But we have something more—we have originals. I believe strongly that the first requisite in study is enthusiasm. Perhaps the two most effective ways of exciting enthusiasm are, first, by teaching the student himself to draw—then he becomes initiated into the brotherhood of artists and has a personal and vital interest in their problems; he tastes of the greatest pleasure known to man—that of creating—for surely creating is greater than worshipping; our highest conception, God, is of a Creator, not of a worshipper. The second is the opportunity to look at original works of art. In this way we come into direct touch with the master himself. There is something about originals which has the power to stir interest where reproductions fail. Of course it is practically impossible to have originals by Michelangelo and Rembrandt, in fact, by most of the great men that we are studying. But the paintings by the masters or the pupils of these great men have a power of awakening interest. For instance, though we have no Raphael here, we have at least three pictures by men who influenced him directly or indirectly, and we have at least five more by men who were painting at about the same time in about the same places and working under much the same influences.

It is true that our early Italian paintings by such men as Niccolo da Foligno, Benozzo Gozzoli, Cosimo Tura, Bartolommeo Vivarini, Pinturicchio, Lorenzo Lotto, and the rest, are not of the first class. They do not interest the average undergraduate any more than they do the general public. Most people see in these simple, earnest, religious pictures only the faults—the flatness, the aloofness from the familiar objects of everyday life, the lack of realism, the lack of atmosphere and perspective. The average undergraduate does not see the high decorative quality, the beautiful workmanship, the masterly skill. But with the students in the fine arts courses it is different. Many of them soon learn to realize that these paintings, at first sight so tame and monotonous, have qualities undreamed of. The eye can see after it has been opened.

It is important to keep the students interested in the museum. The principle is clearly good of having a change of exhibitions. People will come to the museum if a well-advertised and attractive temporary show allures them. The impression is given that there is life in the place, and that the museum, like the rest of the university and the world, is a place of change and growth. Unfortunately, in the case of the Fogg Museum we are handicapped by having so little room. A temporary exhibition is expensive and troublesome to manage, as we have to get carpenters to remove some of our permanent exhibitions and make other changes.

A difficult problem here presents itself. What sort of original works of art shall the university exhibit for the students to look at? I shall speak of this later from another point of view. Here I want to bring up the question of whether the university art museum should contain the works of living men. There are two ways of doing this: first, by the temporary exhibitions; and second, in the permanent collections. It may even be possible to have exhibitions of the work of the students themselves, as is the case at Yale.

In the past the policy of the Fogg Museum has been to exhibit the work of men who are dead. To compare small things to great, it has been a Louvre and not a Luxembourg. This year we have made an innovation and have recently held an exhibition of works by Degas; and in the print room at present is an exhibition of etchings by modern masters, some of whom are alive. The advantages of exhibiting modern works of art are various. The students like it. The artists of today speak in a language the students readily understand. Art is not dead. It is not a memory of the past, nor a butterfly preserved

in a glass bottle. It is among us, and is part of our life. We should be alive to the tendencies of our day.

The difficulty is, first, that all modern art is not good, and we wish to maintain a high standard. In having exhibitions of the work of living men we may subject ourselves to various embarrassments. Artists sometimes have feelings. We do not wish to be always in hot water, and make ourselves unpopular by refusing them if we do not think their work up to our standard. If we attempt to discriminate between the good and bad art of today, people will say: "Judge not that ye be not judged."

That brings up the question of whether after all the university—that is, the university in general, and not Harvard in particular—should not have art critics who are the best obtainable judges on modern art. Would it not be ideal to have the university the headquarters of its community in matters of art? In our case it happens that at present there is a fairly sharp division in our community. The teachers at the Boston Museum School, broadly speaking, are the men who can paint and who teach painting and who are on juries to decide the value of modern works of art. The Boston Museum experts and the Harvard professors are the men who teach the history of art and whose opinions are asked concerning questions of the art of the past. Of course, this is a crude generalization. Some of the latter class paint, and some of the former class have made a careful study of the history of art. Moreover, there are professional artists who teach freehand drawing at Harvard.

Is this an ideal situation? Should not the school of the Boston Museum, and the fine arts department of Harvard College combine or co-operate in such a way that the students who are going to be the painters should have a better education, and the men who are going to be critics should draw better? Then from the combined teaching staff of the two institutions a committee could be chosen to decide which modern artists should be allowed to exhibit in the Boston Museum and the Fogg Museum. I will not go into this question at greater length, because it is really a question of the relation of the fine arts department to the community, whereas my subject is the relation of the museum to the university.

Now in our case there are two museums that are closely related to Harvard. The Fogg Museum is part of the university; the Boston Museum is a generous friend, neighbor, and helper. It is no easy matter to define just what the ideal relation between these two insti-

tutions should be. It is evident that they should not exactly duplicate each other's work. Yet they both, of course, want the best things that are to be had. I am not thinking only of originals: take photographs and books, for example; here there must be some duplication. The Museum of Fine Arts, the Boston Public Library, and Harvard, all must have a good general collection of books and photographs for the general public and for the ordinary undergraduate. But beyond that should there not be a division of labor?

The serious advanced student in the vicinity of Boston can easily make time to go to any one of the three collections. In these days of the rapid production of an immense amount of highly specialized literature on art, often in the form of exceedingly expensive books, would it not be the path of wisdom to have these three institutions agree to have each one take a special field in which to buy books and photographs for the advanced student? As for originals—it is a harder question to decide. Opportunity, and unforeseeable elements enter in. Who would have guessed thirty years ago that the Boston Museum was destined to contain the greatest collection of Japanese art in the world outside of Japan, or that the little Fogg Museum would be stronger than the Boston Museum in its collection of Italian primitives? It may not stay so. Who can tell what gifts and bequests will be made to a museum?

Almost any museum would naturally have a double policy of first using such funds as it had in expanding in some definite direction, and second of accepting such valuable and beautiful objects as were given to it free from embarrassing conditions. The policy of the Fogg Museum is at present to collect prints to add to our famous print collections, for we have some funds that can only be used for this purpose. Beyond that we try as occasion offers to make our collection of Italian art stronger. There are more courses dealing with Italian art at present than with any other subject in the fine arts department. Some day I hope we shall have courses on Flemish and Dutch art; on Spanish, Moorish, and Persian art; and on the art of the East. We already have a few beautiful objects as loans and gifts which give hints of the limitless possibilities of art in the mighty continent where all the great religions of the world have been born. Broadly speaking, we had better keep to our specialty of Italian primitives, except in so far as we receive gifts and loans of other objects. And as a rule we had better let modern art find its home in the Boston Museum.

In conclusion, I believe that the university should have a museum where the student is fired with enthusiasm by the teachers, who are the interpreters of art, by the awakening of new possibilities in himself when he finds that he too can paint and create, and by the inspiration which comes from contact with works of art.

If an art school and university are to combine, they should both be the gainers. The young artist should learn that technical skill is of little avail unless there is spirit; the student should liberate the sleeping powers of his hand. The courses should cover as broad a range of subjects as possible, including not only the historical side with its accompaniment of photographs, but the aesthetic, the technical, and the spiritual sides, going through the range of great thoughts and high ideals in many lands and centuries. Above all, the enthusiasm should be kindled and kept alive by the men and the works of art in the university, and the museum should do its utmost to collect the fairest flowers that are to be found, that tell the story of the artistic and imaginative possibilities of man.

At the request of the President, Mr. French here took the chair.

The following paper was then read by Miss Anna D. Slocum:

POSSIBLE CONNECTIONS BETWEEN THE MUSEUM AND THE SCHOOL

During a recent visit to the American Museum of Natural History in New York, the evolution of an animal from a very small, nimble creature with five toes to the larger hoofed horse of today was brought vividly before our eyes, by means of drawings, life-sized models, and skeletons. On a table near by, was an ingenious arrangement, by which we could see, at a glance, through what inconceivable periods of time this small quadruped had persisted, slowly developing in size through countless cycles of years. This was shown by an exhibition of the teeth of different animals through these long periods. Those of the Titanothere rapidly increasing in size, their owner died out in a comparatively short time; while those of the horse increased slowly, and he still continues in our own age, with a history of countless ages behind him. The scientist who was with us, said: "You see, the horse

has lived on because he was so small in the beginning he slipped through and his size increased very slowly. The animals that grew large rapidly soon became extinct, showing that mere bulk is not fitness."

Are we of America to forget the fate of this colossal creature? How can our museums be used to increase the saving quality of fitness? With all our new educational devices, we must never lose sight of the main object, the quickening and developing of the powers of the child.

Educational methods can become so ponderous, that they defeat their own ends. I felt this when a bright-minded, conscientious girl of fourteen said to me: "In winter I have so many lessons to learn and so much studying to do that I never have time to think; it is only in summer that I can do any thinking." Teaching should not consist in burdening memory or brain, but in exercising the faculties and mind so that they are hungry for more food. One wants "the spring in the horse and not in the whip," and it is just here that museum training comes in to lighten the burdens of the school and to make its efforts still more fruitful, for the charm of museum work is so great that it is easy there to keep the spring in the child. Museums now aim in their exhibits at quality which inspires, rather than at quantity which fatigues. They "show a few impressive and instructive groups rather than a larger number and variety of individual specimens."[1] Besides training the senses, they teach principles through selected cases, thus they use the method employed by the Harvard Law and Scientific Schools.

Science tells us there is nothing in the brain that was not first in the senses, and that a training of the senses quickens the mind. My grandfather, who traveled to New Orleans nearly one hundred years ago by boat, on horseback, and on foot, received a sense-training by the way which I miss when I take the journey today in a parlor car. The advent of steam and electricity with the specialization which has come in their train, the movement of population from country to city, have driven out the old ways of travel, the everyday duties and home industries that gave this sense-training, so these new institutions, museums, are indispensable in enabling the schools to give an education that before was provided in more natural ways. The report of New York's museum of science in 1909 gives the almost incredible number of 922,512 children to whom the museum gave, in

[1] *Report of The American Museum of Natural History*, 1910.

their own schoolrooms, the opportunity for this training new to the schools.

Let us glance, for a moment, at six different subjects which a museum of fine arts can enrich from kindergarten to college, through its appeal to the eye. These are: story-telling, literature, geography, drawing and painting, industrial training, and history.

In the Worcester Art Museum, there are story-hours for children, who come in large numbers. The story-teller says: "In telling the children of Herakles, for instance, I have used views of Greece, illustrations drawn from Greek architecture and sculpture, and vase-painting." Stories from many lands can be illustrated by the museum, preparing the way for a more intelligent, and therefore greater, enjoyment of geography and literature.

In the study of literature, with older children, the museum makes the story more vivid. Dr. Fairbanks has had lists prepared of those objects in our museum "illustrating classical mythology with references to Greek and Latin authors usually read in the schools."

How can our museum help the teacher of geography? In the outline of a course of study for the elementary schools of New York, stands this paragraph:

"A valuable aid to instruction in geography is a picture. . . . One picture is often worth volumes of verbal description, and at the present time, there is scarcely any place or any feature of life or human activity of which a picture is not easily obtainable."

Museums can help the teachers of geography by supplying them with carefully selected photographs and slides, often of objects that can later be seen in the museum itself.

The aid that the museum gives to the teachers and students of drawing and painting is too obvious to be dwelt upon here. Courses of lectures to develop the appreciation of pictures through more careful observation by those who do not make art their vocation, have been carried on in our museum for a number of years by a teacher who has arranged this ingenious plan of study: in the classroom, she gives a lecture which is illustrated by prints, photographs, or textiles to throw light on the one picture to be studied. The following hour is spent in the gallery in silent observation of the picture itself, while the students make pencil notes of its color-relations and maps of its composition. Later in the week, a memory-sketch in color is made and compared with the original at the next lesson. Exercises in imagination are given and studies in the tones and colors of streets and in

houses are required each week to increase the student's enjoyment of his environment.

Many are the ways in which teachers of industrial education can receive practical help through a museum of fine arts. A course of lectures on textiles is now being given to teachers from the Girls' High School of Practical Arts, from Simmons College, and from the Trade School for Girls. The latter sends the heads of its millinery, dressmaking, and art departments. The aim of this course is to give an understanding of different weaves, of color, textures, and design, which can not be obtained from books.

Here is a concrete museum illustration in three pieces of clay, to show the evolution of a common article of everyday use. This cup came from Abydos, and was made when the Israelites were in Egypt. Rough as it is, pains have been taken to free the clay from pebbles. On its base one can still feel and see the impress of the potter's thumb and finger, where he held the soft, damp clay for a moment, from three to four thousand years ago. The second cup is Mycenaean, dating back to the time of Homer. It shows a great advance over the first, both in the preparation of the clay and in its shape, better fitted for use, with its curved lip from which to drink, or pour, and its handle. It is also decorated. Our third piece came from Greece, and was made before the days of Athenian supremacy—in the 6th or 7th century before Christ. Still more skill, betokening a higher civilization, has gone into the making of this kylix, which shows great artistic feeling both in form and decoration. The museum can thus show higher standards to the industrial worker. If its leaven entered the grammar-school graduate, when he became a carpenter, he might not build the unsightly wooden houses that spring up around our large cities.

Besides the better preparation for work, the museum by giving more vitality to the sense of sight, opens happy ways to the enjoyment of leisure hours, and gives refreshment and rebound to the mind deadened by routine.

But of equal importance with the better workmanship, the more attractive environment, the greater enjoyment of leisure, is the deeper insight into history that may be obtained by study in the museum. For the spirit of a nation, created by its citizens, is revealed by its artists.

If the struggle between Spain and Holland is studied, the contrasting characters of the Spanish and Dutch races, their different govern-

ments, and opposite points of view will be the better understood, if the student is familiar with their painters. Velasquez shows the life of the court in his land of courteous manners, of despotism, and of power. In striking contrast to this, is the life depicted by the Dutch masters. They painted the common everyday life of the people, the pastures, the cows, the windmills, the harbors filled with boats, and they also painted portraits of the strong men and women who made their history. One can not study the paintings and prints of Spain and Holland, represented in our museum, without gaining an understanding of these peoples that books alone can not give. If the pupils can not come to the museum, at least they can have lantern slides and photographs in their own schoolrooms.

A valuable method of using our Greek and Roman collections has been worked out by a teacher with the aid of officers of the Museum. She illustrates her course of study from the prehistoric age to the time of the Roman Empire with a series of more than six hundred half-tones. These illustrations are chosen, as far as possible, from the Museum's collections. Once a month, her pupils come to the Museum to see the originals and make sketches of some of the objects studied in connection with their schoolwork.

The museum's opportunity of supplying our new-comers with the familiar sights of home, impressed me when I met a Chinese girl of twelve, in a friend's house. She had been sent here to receive our western education. How completely she was a stranger in a strange land came over us, when we watched the delight with which she first saw and then handled a shell from the far East, the one thing in that house that was like what she had at home. Many are the objects that our museums contain to bring back distant lands to our homesick immigrants. To train these immigrants for their future duties as citizens of our republic the most vivid teaching of history is necessary. Our public schools need the help of those who have gone into the depths of past civilizations, and who, from the mass of chaotic details, can bring before the pupil, with the aid of the museum, the main features of the country studied, showing what each nation has contributed to civilization; thus giving to the student some idea of the place that our country holds in the progress of the world. Here, in this new epoch, is our opportunity; and this is our material: thousands and thousands of young minds to reach—children of the unlettered—with the museum, a new institution in our educational world, which makes, through the eye and the emotions, a more vivid appeal

than books alone can do. Later on for these same children (thanks to shorter working hours) there is given a margin of leisure with the opportunity of extension courses for developing still further the interests inspired by the school.

"The greatest work which the Romans performed in the world," said John Fiske, "was to assume the aggressive against menacing barbarism, to subdue it, to tame it, and to enlist its brute force on the side of law and order." There are conditions in our American society, today, resembling those of ancient Rome. Are our political ideas of unity of government, liberty, and law to be overwhelmed by our great size, our material possessions, our wealth of immigrants, or shall we be able to enlist these forces on the side of law, order, and progress? While Rome used the simpler method of armies and of military compulsion, we must work through schools and through inner conviction. "If you convince a man that another way of looking at things is more profound, another form of pleasure more subtle than that to which he has been accustomed, if you make him really see it, the very nature of man is such that he will desire the profounder thought and the subtler joy." May not we use our vast material wealth for these finer issues, and spend our increasing resources not on the letter that killeth, but in the kindling of the spirit which giveth life?

Secretary Rea.—"I would like to say a few words with regard to the subject of these last two papers. It seems to me they open an opportunity for a very profitable consideration of the relation of museums to universities and colleges. Two phases of the work have been brought out. One, considered so admirably by Miss Slocum, relates to the work of the museum in connection with the work of a college, and that is, of course, after all, the fundamental reason for any association between the two. Another point of view, however, which is of particular interest to me at present is with regard to the administrative relation of the museum with the university, and this comes of the fact that, as I stated yesterday, I find that a great majority of museums in this country, particularly museums of science, are in association with colleges and universities, drawing their support from these institutions. Further, it is evident from my examination of the subject that the greater part of these museums are inactive, for the reason, usually, that there are no funds except salaries, and these are generally given to one or two or three officers of instruction in the

college, and the museum collection is usually designed for such cursory illustrative purposes as may be desired in the courses of instruction.

"From the point of view of the American Association of Museums I would very much like to know whether this is the final condition to be attained with regard to small museums. Is there a field for this association of the heads and administrative officers of American museums in the encouragement and development of more active work on the part of these small museums?

"Our Association draws its membership from less than half of the American museums, and the remaining half is composed largely of private and college collections. Are we going to see the college collection in America become a depository for objects which do not have sufficient value to be of interest to scientific institutions or of material given by devoted alumni and thereafter lost to science? I do not mean to say that the material is never utilized. Some of it is used in courses of instruction. In a geological course, undoubtedly, the professor draws on specimens for illustration, but nevertheless we find that many of these museums are very much larger than the courses of instruction demand.

"I have personal experience with an institution where the museum happened to be larger than the institution with which it was associated and yet got no support. So extensive a museum was not needed for instruction. Nevertheless it had been built up under many different impulses and through the work of many different persons. It is perhaps an extreme case, but many other museums in connection with schools, colleges, and universities are not fulfilling anything like the functions which they might. The welfare of the Association is largely connected with its ability to analyze properly and solve a few of these problems. If we have a few moments for discussion I would like to know from some persons who represent both art and science museums something of their feeling with regard to the possibility of a better development in the museums which are associated with the institutions of learning."

Mr. Herbert E. Sargent (Kent Scientific Museum, Grand Rapids).—"I was recently in charge of the museum in one of our largest institutions of learning. There was a shortage in the funds of the biological department and as a result the museum was called upon to devote most of its resources to the furnishing of material for the department. It seems to me that this is one of the bad features in the organization

of college museums. Since I left this institution the museum has hardly changed as far as its public activities are concerned. In fact it does little except to exhibit its collections, which consist largely of material sent out by the geological survey. The possibilities of the museum in relation to the general public were never developed and seldom are in college museums. I am now connected with an institution which is in many respects not so large but which, being a municipal museum, does vastly more museum work, chiefly in co-operation with the public schools. Technical scientific work must be done mainly in the larger institutions with ample funds and more extensive collections. I began my work among the teachers, who felt at first that visiting the museum with their classes was simply an addition to their work. They did not realize that the stimulus to the interest and ideas of the children would react on all their other work so as to make the teacher's task lighter in the end. If we can convince our teachers that the co-operation of the museum will be a help and not a burden to them we shall be accomplishing much, for if we get their good-will we get that of the pupils and if we get the good-will of the pupils we get the good-will of the people."

Mr. George Francis Dow (*Essex Institute*).—"I am interested to know what has been done to obtain the influence of the school boards or of the superintendents of schools. Our schools to a very limited extent visit the museums in an official capacity, but I cannot believe but that in New York or some of the large cities, where we learn that such tremendous numbers of children visit the museums, there must be some law, laid down by the school board, requiring the classes to visit the museums at designated times. I have tried in Salem to obtain something of that sort but thus far the school superintendent and the board have not looked upon it with great favor. Do the school boards in other sections of the country make it a part of the school work to visit the museums?"

Mr. Henry R. Howland (*Buffalo Society of Natural Sciences*).—"In Buffalo, as in every other city in New York, the state requires of the grammar school a certain amount of nature study, physiology, etc., for which the schools are never properly equipped and for which the teachers are never adequately fitted, their knowledge of the subject being that which they derive from the textbooks they are using. The Buffalo Society of Natural Sciences, appreciating that fact, went to the superintendent of public instruction, and put the situation plainly to him. Previous to that time it had been the custom of teachers to

bring their pupils at irregular intervals to our rooms for the study of our collection, or for such purposes as they thought would be of help to them, and we volunteered to take that work upon ourselves if the department of public instruction would send the grammar school pupils to us for it. Next September will be the beginning of the sixth year of an arrangement by which the superintendent of public instruction, at the beginning of each year, makes out a schedule for every grammar school from the fifth grade up to come to our rooms at a definite day and hour. We provide a competent resident lecturer, and furnish all the subjects and materials for instruction, including lantern slides. As a result, every morning and afternoon of the school year our rooms are filled by the grammar school children of Buffalo. The teachers do not regard it as more work, but in the course of five years I find that they have learned to regard it as one of the best things that ever happened in the public schools. I believe we were the first institution of the kind in this or any other country to so directly correlate our work with the public schools. We do all this work for the grammar schools of the city of Buffalo, and it is compulsory that they come to us. We do this work very largely out of our own pockets, for the City of Buffalo, as represented by a board of aldermen and councilmen, has given us the immense sum of one thousand dollars each year for work that costs between six and seven thousand at least."

Mr. Henry L. Ward (Milwaukee Public Museum).—"In regard to Mr. Dow's question I would state that in Milwaukee the conditions are somewhat different from what Mr. Howland speaks of in Buffalo, inasmuch as natural science does not form any part of the school curriculum, so the connection between the museum and the school does not so naturally come about. We have, however, a very close and intimate connection which I think is growing in appreciation with the teachers, although even now some of them not infrequently feel that we are making more work for them, but like Mr. Sargent, we try to convince them that we are making their work easier by what we do for them.

"For some twelve or thirteen years in Milwaukee the public school children have been coming to the Museum in regular classes to receive instruction. Up to about four years ago this work was carried on by the school board, in that they furnished a lecturer. We merely furnished the room and the specimens for illustrative purposes, but then we took it over and now all our school children come to the museum

to listen to the museum lecturers, whose sole duty it is to attend to that work.

"The entire time of two men and a boy is given up to this work. It is expensive but we are very glad to do it for the schools, because I feel that it is essential that the museum should have certain definite things it can point to as being accomplished for the city in return for the appropriation that it receives. We receive from the school board twenty-five hundred dollars a year, which covers approximately half the cost of the work. We have three regular classes at the museum every day and reach in that way between twenty-six and twenty-seven thousand school children in the course of a year. We also reach a good many children from parochial schools. The lecturer and various members of the staff occasionally go out to public schools, to high schools, and to our Milwaukee Normal College, and there give lectures gratuitously. I have in contemplation a considerable increase in that sort of work. In fact, the appointment of a curator of education is now before our board of directors. If they make that appointment it undoubtedly will be a man who is thoroughly trained in educational work, who has the theory as well as the practice and whose entire time will be given to making the connection between the Museum and the different schools and other educational interests of the city more close. We also have under consideration a certain connection with the State University, which is some distance removed, in the city of Madison. The University has been very progressive in coming down to Milwaukee and carrying on university extension courses, and we hope ultimately to work out some connection which will be mutually beneficial."

Mr. Frank Butler Gay (*Wadsworth Atheneum, Hartford*).—"Mr. President, I have recently come into the Association. The gentleman from Buffalo has solved the difficulty for me, and I am very much obliged to him. If the school board will make work at the museum obligatory one difficulty that I find will be removed. It will then be possible to exercise some control over the children and to make the instruction orderly. Again, if the teachers come to the museum during school time and are not required to prepare regular work for that time they will not feel that it is an addition to their labors, but will enjoy coming."

Mr. Sargent.—"Another word on the subject of getting the goodwill of the community, especially when the museum is supported by public funds. A few weeks ago we undertook an analysis of the

attendance in the Kent Scientific Museum. We found that of eleven hundred visitors over four hundred were non-residents, and that among two thousand something like two hundred and fifty came from towns and cities within a radius of fifty miles. Nearly all the states in the union were represented and one or two foreign countries. In a large city like Boston the museum is but one of many points of interest, while in the comparatively small town there are fewer things to see and nearly everyone visits the museum. Often they come to see something which they know we have and their interest is aroused so that they come again and again. They also go home and talk about what they have seen and their friends come. I have convinced many of the business people that the Museum probably brings into the town as much money as it costs to maintain it.

"Our teachers have brought to the Museum during the year something like eight hundred pupils and I should say that an equal number have come of their own accord. Seven and one-half per cent of the public school pupils have been brought by the teachers and next year I hope to be able to report a larger proportion."

Mr. Louis Earle Rowe (*Museum of Fine Arts*).—"In Boston nothing has been done by the school board except that the superintendent is interested in the problem and has requested reports from teachers who avail themselves of the docent system. The teachers, especially through the Classical Association of Teachers, have been working for some time on methods of uniting the class work with the museum work. The teachers of history and classics from the four high schools have brought all of their pupils for three years past, bringing, in two cases at least, one hundred and fifty pupils. They are not taken into the lecture hall and talked to for an hour with lantern slides, but are taken in small groups before the original object, which greatly increases the amount of work for the Museum. Another experiment in Boston, several years ago, was the systematic study of a number of pictures by the pupils. They came to the Museum and saw the originals and then wrote out their own report. I think work of this character is of much greater advantage than lectures illustrated by lantern slides."

Dr. Marshall A. Howe (*New York Botanical Garden*).—"Just a word about the experience of the New York Botanical Garden in cooperating with the nature study work of the public schools of the Borough of the Bronx may be of interest to the members of the Association. At the present time we are instructing about ten thousand

children from this borough. The distances in New York City are so great and the pupils so numerous that we find it necessary to restrict our activity to this borough. The children come to us in delegations of from five hundred to seven hundred, accompanied by teachers and also by the principal. Before the lantern slide lecture, which lasts about twenty minutes, the principal gives a short talk to the children, impressing upon them that it is a regular part of their school work and that they are expected to maintain the same discipline that they do in the schoolroom. After this short lecture they are taken in squads of about fifty for demonstrations in the Museum, on the grounds, and in the conservatory. It is so arranged that they are out of the grounds at the end of about an hour from the time that they enter. Some of the teachers find that this is an addition to their work but I think it is the general impression that the plan is a very beneficial one and that the pupils get good instruction from it. Similar work on a larger scale is being looked forward to on the part of the newly established Brooklyn Botanical Gardens."

Mr. Wm. M. R. French (*Art Institute of Chicago*).—"I have been impressed in these meetings from year to year with the attention paid to the education of children, which I take to be a healthy sign of the times. I think it would be better not to prolong this discussion but to continue the program."

The Chair then announced that the paper entitled "Comparison between American and European Museums" by Dr. Edwin Atlee Barber, director of the Pennsylvania Museum and School of Industrial Art, Philadelphia, would not be presented as Dr. Barber had been unable to prepare it.

Dr. Barber.—"I feel it incumbent upon me to offer an explanation of my failure to come here prepared with this paper. It is caused by physical disability extending over several months and by order of my physician, who forbad me to use my eyes for any work whatever. I would, however, like to say a few words upon the points which I desired to bring out in my paper.

"About a year ago I had the opportunity of visiting some twenty-five European art museums and of comparing the methods of those museums with the administrative methods of American museums. I think the first thing that strikes the American museum man is the failure of the administrators of European museums to cater to the poorer classes. They seem to be entirely ignored and discouraged from attending the museums.

"In some instances the museums are closed every holiday, the very time when poor people could attend. I think that is universal all over Europe. The hours when the museums are open are generally short, sometimes only two or three hours a day. The next thing that will probably strike the American museum man is the dearth of labels in the continental museums. In some museums there are practically none, and on inquiry I found that it was intentional, that the labels were withheld for the purpose of selling the catalogs and handbooks, which at best are inadequate, instead of labeling everything. These catalogs and handbooks are unsatisfactory and insufficient, and of course, not accessible to the poorer people. Another thing which struck me was the practice of petty graft. It was necessary to pay every attendant, every man you spoke to, a small coin to direct you to a case. This is apparently encouraged by the management of the museums. But the principal thing that struck me was the abundance of forgeries, manifest reproductions. A great many European experts have criticised our museums; some of them say that there are no American museums which are not filled with forgeries, but I think, on the whole, there is a larger proportion of forgeries in European museums than in our museums. In England they are more progressive. A museum there seems to be carried on for the purpose of educating and instructing. They are more liberal. Tipping is forbidden in many museums and they are open on holidays and seem in every way to cater to the poorer classes and encourage their attendance."

Mr. A. H. Cooper-Prichard (*American Numismatic Society*).—"In regard to Mr. Forbes' paper and what he says of the duplicating of collections in different museums in the same city I would like to say that from the point of view of the specialist it is extremely important that we should all co-operate in concentrating in each museum the kind of material that it is particularly able to care for, so that a student need not be under the necessity of going from one museum to another in the same city in order to see scattered collections of valuable material of one kind."

At this point the plans of the new Germanic Museum at Harvard University were demonstrated by means of lantern slides by Prof. Kuno Francke, curator of the Museum.

The session then adjourned for luncheon at the Harvard Union.

SESSION OF WEDNESDAY, MAY 24

Afternoon

The afternoon session was held at 3 p.m. in the geological lecture hall of the University Museum.

President Skiff.—"The Chair will ask the Association to resume the consideration of the question of the museum's relation with schools or colleges, and will ask Dr. Lucas to present anything he has upon that subject."

Dr. Frederic A. Lucas (Brooklyn Institute Museums).—"I simply wish to set forth what seems to me an abundant reason why the university museum is so often dead, and that is the lack of correlation between the museum and the professors. The professors of the scientific departments are not used to teaching with specimens. They are used to too much teaching with books, and if there is a curator in charge of the museum he is very apt not to consider the museum in relation to the university and its courses of study, but rather to consider it as a museum apart, and therein he makes a mistake. The collections of a university museum and the mode in which they are exhibited should bear a direct relation to the courses of study in the university or college. Too often the collections are entirely too big, and entirely unrelated to the course of study. It so happens that Professor Wallenstein, Dr. Wise, Dr. Cole, and Dr. Gregory, of Columbia, all happened to visit the Brooklyn Museum within three weeks, and they each and all said that the exhibits there were exactly what they would like to have for their university courses. Of course, this applied merely to courses in biology, but it is equally true of geology and mineralogy that the specimens are not arranged in such a way as to help the courses, and whoever is in charge of the museum does not make a study of the situation as he should. It seems to me this is the explanation of the absolute deadness of so many of our university and college museums."

Dr. Frederick W. Putnam (Peabody Museum, Cambridge).—"Dr. Lucas has alluded to the death of the museums in the universities because they are not made applicable to the use of the students. Now, I am glad Dr. Lucas has brought this matter up because I think here at Harvard we have a little different method, and a method which could well be introduced into other universities where they have museums. Our museums here are primarily for the purpose of education, for the purposes of the University. They are not museums that

cater to the public. The public may get all it can out of them. We are very glad to have the public come and examine our museums, study their arrangement, and study the objects that are in them. We are careful to label the collections in such a way as to make them instructive to the public.

"I will take as an example the anthropological section of this museum. It is particularly under my charge and has been developed primarily for the purpose of conducting the education of the students of Harvard University. That has also been the object of the geological, zoological, mineralogical, and botanical museums here, and I think I may say it is the same with the Semitic and the Germanic museums and also with the art museum. We use the museums to a very great extent in our instruction, and the professors and instructors in the departments have the use not only of the general collections, but of special collections in each department that are particularly for the use of the students. In each section there is a special group of specimens for the students to handle and to study. When you come to the anthropological section you find a little collection in the lecture hall itself, which is constantly used by the instructor in illustrating the point that he is making. Then we have the whole museum for the use of the students and the instructors. Not only that, but in the syllabus of our courses in anthropology we have a list of subjects which the student must consult. For instance, if he is told to write a report upon the pottery of a certain region, or upon the textiles of a certain people, it is stated in the list in what room the specimens are that will illustrate that subject, and the student goes to the room and studies the specimens in the cases and writes his report.

"If he wishes to get something more than he can by just looking at the specimens through the glass, he goes to one of the officers of the museum and is given the use of specimens illustrating his subject, specimens that he can handle, and of which he can see the pieces as well as the whole specimen. There is more to be made out by the study of broken stone implements and pieces of stone in process of chipping than there is in looking at a collection of finished objects. There is more to be made out by studying a mass of fragments of pottery than there is in going through a thousand specimens of perfect jars. So the student has the specimens placed in his hands to make further observations and research, and in that way our museum has been made of special use to the courses which have anything to do with the museum. It was Louis Agassiz who first started that work

in the early fifties. I remember well when I was a student with him his giving me a specimen to dissect and saying, 'Now, Mr. Putnam, I do not want you to look at one book. You look at this specimen, you study this specimen. I will ask you what you have seen.' When a few days had passed he would come around to my table and ask what I had seen. I would explain the outside of a turtle or a bird or a fish, or whatever he had given me. He would then ask me questions and lead me on from one thing to another, but never a book was I allowed to touch or look into, until after I had made my own researches upon the specimen, then he would say, 'Go to the book now and see what the names of these things are, but remember, names are nothing but bookkeeping. It is just a debit and credit account between man and nature, and this going to books is merely for you to get the names and read what somebody has thought about this thing before you had begun to think about it, and you draw your conclusions yourself and write your paper from what you have observed. If anybody else has observed anything that is worth recording, bring it in, and you will probably find more blunders recorded than you will good facts.' And so he taught the study in that way, to avoid textbooks and all sorts of books that related to the subject we were studying until we were qualified to read those books and subjects critically and understand what they really meant. After we had worked out all of the muscles and nerves and blood vessels and wanted to know what to call them we went to a book, simply to get the names, the same as you go to a dictionary to know how to spell a word, and that was the only use of the book to us. Now, in our courses today, Dr. Tozzer has done the same in this syllabus. That is certainly something more than book work and that is the method that I think is being adopted very thoroughly in Harvard wherever specimens can be used. The classical department is using specimens illustrating classical work and so it is throughout many departments of the University." (*Applause.*)

At this point Mr. Huger Elliott, director of the Rhode Island School of Design, demonstrated by means of lantern slides the beautiful Pendleton collection of furniture of the Georgian period as it is installed in a house of Colonial design erected to contain it.

A paper on "Co-operation in Collecting" by Mr. George P. Goll, curator's assistant in the Philadelphia Museums, was then read by Mr. Toothaker. This paper advocated the combination of a number of museums in defraying the expense of expeditions for the purpose

of collecting all kinds of specimens in anthropology and biology in the region visited.

Dr. Carl H. Eigenmann, curator of ichthyology in the Carnegie Museum, believed that such expeditions would result only in a miscellaneous lot of material which might be of some exhibitional value but of little scientific value. He stressed the importance of confining the energy of a collector to a very narrow field in order to secure the most valuable results. He suggested that if the expedition included specialists in a number of branches the ground might be satisfactorily covered. Dr. Skiff stated that the Field Museum is conducting a number of expeditions in collaboration with other institutions on the line suggested by Dr. Eigenmann. By this arrangement competent experts go from each institution and divide both their specimens and their notes, type material always going to the party that secures it. This plan is found to work very well, having the advantage of a certain amount of economy both in expense and in scientific results. Its chief advantage, however, is that it provides companionship, advice and consultation, and help in case of accidents or illness. Dr. W. P. Wilson stated that the Philadelphia Museums have frequently paid a part of the expenses of a collector who was in the employ of another institution in return for a small amount of special material which he might collect as a side issue. In this way it has been possible to fill in gaps in the collections or to obtain a small series of specimens which would not be worth sending out a special expedition for. Mr. H. L. Madison, curator of the Park Museum in Providence, suggested the value of co-operation among the smaller museums in collecting specimens for exhibition, especially in the exchange of local material.

Dr. Sigmund Graenicher, curator of invertebrate zoology, Public Museum of the City of Milwaukee, then read a paper on "The Preparation of Mushrooms for Exhibition Purposes." Dr. Graenicher reviewed his experiments in attempting to make satisfactory casts of the more delicate gill-bearing mushrooms by allowing plaster of paris to be deposited from suspension in water between the gills. He found that the weight of the plaster bent the gills, and therefore discarded the method. He next tried electro-plating but again was dissatisfied with the results. He expressed his desire to receive suggestions as to more satisfactory methods.

The following paper was then read by Dr. Frederic A. Lucas, curator-in-chief of the Museums of the Brooklyn Institute of Arts and Sciences:

WHAT SHALL WE DO WITH OUR FOSSILS AND SKELETONS?

At the Buffalo meeting of this Association, my friend, Mr. Ward, propounded the conundrum, "What shall we do with our fossils and skeletons?" Standing almost within the shadow of my birthplace on Plymouth Rock, it is my indubitable privilege to answer this question by asking another. So I will ask "What do you wish to do?" For one of the charms of museum specimens is the many games one can play with them. If you desire to show the structure of vertebrates, to trace the steps by which the cartilaginous rod of Amphioxus has become a complex piece of machinery adapted for swimming, walking, or flying, as the case may be, then you place your skeletons by themselves like the fine exhibit in the United States National Museum. If you wish also to show the relationship of existing animals to those that have dropped out of the race for existence, to show some of nature's failures, you include the skeletons of extinct animals. In no other way can you explain some existing facts. If you wish to play another game, and to show with any given group of animals their structural characters, the facts on which any true system of classification must be based, you intersperse the skeletons with your mounted specimens and give the visitor with a serious turn of mind, the thousandth or ten thousandth man, a chance to learn something. And, here again, you mix your fossils, actual specimens, supplemented by restorations, with existing forms to show the lost links in the chain of animal life, the boughs on the tree of life that have been lopped off, destroying the symmetry of the living tree.

Again, skeletons in whole or in part come in to form, or aid in forming, special exhibits. For example, our own flight series comprises many specimens illustrating modifications of the skeleton for various kinds of flight, flying, soaring, gliding, and also a series showing how, starting with a generalized limb, one reaches the three types of wing found in the bat, bird, and pterodactyl.

Another series where skeletons are absolutely essential is that showing man and apes, wherein the skeleton of the child compared with that of a young chimpanzee shows similarity, the skeletons of man and full-grown gorilla some of the structural differences between man and his nearest relatives.

As with skeletons, so with fossils. It depends upon what one wishes to illustrate. No exhibit of invertebrates can be complete without

fossils; crinoids, trilobites, and ammonites, for instance, will occur to everyone. As for fossils as a whole, do you wish to show the interrelations of the entire animal kingdom, or the successive stages by which the life of the present day has been reached? It all depends. In the one case you arrange them zoologically, in the other geologically. The one series shows the life of the past as a whole, the other the changes that have taken place in the animal kingdom since the appearance of life and the ever varying changes in the composition of the life of the globe. Here you may see how successively trilobites, ammonites, sharks, amphibians, or dinosaurs, as the case may be, were the predominant features in the life of their long past day and how one by one they were ruthlessly blotted out of existence to make way for other forms. In the American Museum of Natural History the fossil vertebrates are arranged phylogenetically to show the history of some given group. And, here, instead of fossils being used to supplement the skeletons, skeletons are employed to round out the exhibits of fossils, and show the final point in the history of a family. Here you may trace rise, progress, and decline or extinction of many important groups and see how skull and teeth and limb have changed to keep pace with varying conditions; see where failure to progress has led to extermination, or where the following of some bad fashion in structure, or the carrying to excess of some feature once useful, has become detrimental. As Professor Marsh said "Many an animal may well have engraved upon its tombstone 'I and my race perished of over-specialization.' " The ultra fashionable is a failure in nature as well as among womankind.

I believe I said at Buffalo that I could speak an hour on this subject, but I won't. It isn't necessary: Jay Gould said that a man was just as well off with a million as though he were rich, and these remarks will show some of the many things that may be done with fossils and skeletons. It all depends on the game you wish to play and on the skill of the curator who moves the pieces.

The session then adjourned until evening.

SESSION OF WEDNESDAY, MAY 24

Evening

The evening session was called to order at 8 p.m. in the rooms of the Boston Society of Natural History by President Skiff.

Mr. Charles W. Johnson, curator, Boston Society of Natural History, read a paper on "The Work of a Local Museum," referring especially to the work of the Boston Society.

Miss Delia I. Griffin, director of the Fairbanks Museum of Natural Science, St. Johnsbury, then gave a most interesting account of the Fairbanks Museum and its work, illustrated with lantern slides.[1]

Following this Dr. Edwin Atlee Barber, director of the Pennsylvania Museum, demonstrated a series of labels showing the style adopted in his institution.

Mr. Charles R. Toothaker then showed a brass clip used as a label-holder, which was designed by Mr. Wilfred H. Schoff of the Philadelphia Museums.

The evening program was concluded with a most entertaining and instructive address on "How to make Museums valuable to the Public," by Mr. A. H. Griffith, director of the Detroit Museum of Art.

SESSION OF THURSDAY, MAY 25

Morning

The Association met in Salem at 10.30 a.m. and the meeting was called to order by President Skiff in the lecture hall of the Peabody Museum. His Honor, Mayor Adams, then gave an address of welcome. In the absence of the director of the Museum, Prof. Edward S. Morse, who was prevented by a death in his immediate family from taking part in the exercises, Mr. John Robinson of the board of trustees and an officer of the Museum, gave the following account of the institution and its activities.

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[1] For an earlier paper by Miss Griffin on this subject see *Proc. Am. Assoc. Mus.* I, 130–143.

THE PEABODY MUSEUM OF SALEM, MASSACHUSETTS

The present museum of "The Trustees of the Peabody Academy of Science," known as the Peabody Museum of Salem, originated in the museum of the Salem East India Marine Society which was organized in 1799, four objects included in the first gift to the original museum being still preserved in the collection, having been on exhibition continuously for 112 years. The Salem East India Marine Society was formed as a social, charitable, and semi-scientific club to "assist the widows and children of deceased members," to make observations and records which should "tend to the improvement and security of navigation," and "to form a museum of natural and artificial curiosities, particularly such as are to be found beyond the Cape of Good Hope and Cape Horn." Only the masters and supercargoes of Salem vessels who had "actually navigated the seas" near these southern capes were eligible to membership, and yet there were 406 persons admitted to the society during the one hundred and ten years of its existence who met these unique requirements.

At the close of the American Revolution Salem possessed a great number of strong, swift and, for the day, large vessels which had been used in privateering against the British, manned by daring officers and hardy seamen. How to utilize these vessels was a problem of the utmost importance for the owners to solve. The answer was found in voyages for the extension of commerce to new lands through then uncharted seas. Salem ships were thus the first to display the American flag in many foreign ports and justified the motto on the city seal which, freely translated, would read: her ships brought to Salem "the riches of the Indies" and sailed "even to the remotest ports." And thus it was, too, that so many persons could be found to meet the requirements for membership in the East India Marine Society and that the ethnological collection of the museum was so early established. The relics of sea life and the pictures of ships painted in foreign ports, the full rigged and the working hull models of vessels, together with the portraits of the ship-masters and the old time Salem merchants naturally accumulated here. This accumulation, organized, augmented, and arranged, became the "Marine Room" of the Peabody Museum.

While the East India Marine Society gathered "natural" as well as "artificial curiosities," the ethnological collections were by far the larger and the more important and, with the exception of a few rare

objects still preserved, the specimens of natural history from this source form but a small portion of the present museum. In 1834, however, the Essex County Natural History Society was organized and at once began the formation of a museum of natural history, more especially of the flora and fauna of the county. This society united with the Essex Historical Society in 1848 under the name of the Essex Institute.

Twenty years passed and found these institutions with large collections which had outgrown their means of support. At this time, 1867, George Peabody of London, a native of Danvers near Salem, founded the Trustees of the Peabody Academy of Science, which body by harmonious arrangement purchased the building of the East India Marine Society and took over its collections and the natural history collections of the Essex Institute and established the Peabody Museum, which in the words of the founder of the trust stands "for the promotion of science and useful knowledge in the county of Essex." The natural history department of the museum is, therefore, the outgrowth of the early Essex County Natural History Society through the Essex Institute.

The erection of the large building on Essex Street by the East India Marine Society in 1824, primarily for its museum, when Salem had but 13,000 inhabitants, was an event of sufficient importance for the president of the United States, John Quincy Adams, to come to Salem in 1825 to participate in its dedication, while the names, "East India Marine Hall," "Oriental Insurance Company," and "Asiatic Bank," cut in its stone front testify to Salem's association with the "Far East." From the single hall then opened the museum has grown to fill four large halls today.

The Peabody Museum is supported by the trust funds and the contributions of generous friends: it has never received a dollar from the treasuries of the city, county, or state. A constable is furnished by the city in consideration that the museum is always open to the public free of charge. Although in the early days of the East India Marine Society it required a pass from a member to visit the museum, still no admission fee was ever charged from 1799 to the present time. The museum has been open to the public every day in the year, including Sundays and holidays, since 1889 and on every week day since 1869. In 1889 the new hall of ethnology was opened and in 1905 the Marine Room. The Weld hall was opened in 1907. The museum is visited by more than 65,000 persons annually.

The session was then adjourned for an inspection of the Peabody Museum and a visit to the Essex Institute, where members were shown about by the curator, Mr. George Francis Dow.

SESSION OF THURSDAY, MAY 25

Afternoon

After luncheon at the Peabody Museum the afternoon session was called to order at 3 o'clock by President Skiff at the Peabody Museum.

A paper on "Exhibition Cases in European Museums," by Prof. Edward S. Morse, director of the Peabody Museum, was then read, in the absence of the author, by Dr. Frederic A. Lucas.

Dr. Frederic A. Lucas (*Brooklyn Institute Museums*).—"I might continue Professor Morse's paper further. I might say that things are better arranged in vertical cases than they are in horizontal ones. You can get a great deal more in a high space than you can by arranging them in flat cases. But shells and echinoderms undoubtedly can be seen to best advantage in a horizontal case, although it demands a very large amount of room, and I think with insects and with shells the Liverpool Museum's plan is best, which we have adopted in one or two instances in Brooklyn, that is, to have a small number of specimens on continuous exhibition, and a series of drawers containing a larger series which may be drawn out by any visitor. We have a full series of the insects found on Long Island, so arranged that any visitor may see them well. The permanent exhibit is confined to a comparatively few cases, showing the life history of some of the insects."

Dr. W. J. Holland (*Carnegie Museum*).—"The most economical exhibition of insects that I know of, and one of the most satisfactory faunal exhibits, is that presented by the gift of Lord Wolfingham to the British Museum. It consists of horizontal drawers, arranged in cases, and rising to a height of about two feet or thirty inches above the floor, extending about this wide (*indicating*). The drawers are set so that they can be withdrawn, and every species of insect in the order of lepidoptera is represented there. It gives the entire life history—all you have to do is to pull the drawer out and look at them and put the drawer back when you are through. There you have all the insects in a space not longer than from here to that table, and in an exhibition case that is only about two feet high in mahogany cases. All the information that the student or the amateur wishes to receive

is there. It is a very valuable contribution. It cost His Lordship a vast sum of money but the whole thing is exhibited in a compact space and I think that is a way of doing things which is worthy of emulation."

Dr. Lucas.—"That is the same plan we use in Brooklyn, Dr. Holland."

President Skiff.—"The next number on the program is a paper by Prof. Franklin W. Hooper, director of the Brooklyn Institute of Arts and Sciences."

ENDOWMENT OF MUSEUMS FOR RESEARCH WORK

We have four great classes of educational institutions: (1) Schools, colleges, institutes, and universities where the emphasis is placed upon instruction by lectures, classroom exercises, laboratory, and shop-work. (2) Libraries where the emphasis is placed upon the reading of the literature of every department of human interest. (3) Museums where the emphasis is found in the collection, instructive exhibition, and loan of objects of historic, artistic, scientific, industrial, natural, or commercial importance. (4) Institutions for research work, notable examples of which are the Carnegie Institution of Washington and the Rockefeller Institute of New York, in which the chief purpose is the increase of knowledge.

In all of these classes of institutions research work is done in increasing quantities from year to year. Through the researches of the last hundred years more progress has been made in the arts and sciences, in industry and commerce, than in the preceding two thousand years. The spirit of our twentieth century is the spirit of research. It is to be found in the chemical, physical, and electrical laboratories of the great manufacturers and producers, and in the laboratories of the New England Telephone and Telegraph Company in Boston and Salem, of the General Electric Company in Schenectady, of the great sugar refineries of Boston, New York, and San Francisco, of the American Chemical Company of Brooklyn, of the Westinghouse Electric Company of Pennsylvania, and of the great steel companies of Pittsburgh, Buffalo, and Cleveland. It is to be found in the engineering offices of our great railroad corporations, our steamship companies, our public service corporations, our bridge construction companies; in connection with all of the great engineering works now in progress, including the Panama Canal, the Catskill Aqueduct, the five great

bridges spanning New York's East River; in our new systems of subways; and in the relay systems of telephony. Every successful industry is based on the results of research work and directly or indirectly is daily fostered by it. The successful farmer uses the knowledge of soils, fertilizers, crops, breeding, dairying, and fruit-raising furnished to him by experiment stations, by government investigations, and by his own experimental work. A Luther Burbank improves the food products of the world.

This spirit of research which is so omnipresent in the world of affairs has also permeated our educational institutions and in them is now a more important factor than in any preceding decade. This spirit is to be found in our elementary schools. Every good elementary school teacher is engaged in it. She is observing exceptional mental traits in children and is adapting her instruction to those traits. She is discovering the mentally defective and with the aid of a specialist is having them transferred to classes conducted especially for their benefit. She is selecting the anaemic children and reporting them to the school physician, by whom they are sent to schools where with light and air and with the aid of proper diet and other hygienic conditions they become healthy and vigorous. The elementary school teacher's success depends in a very large degree upon her ability to read the characters of her pupils, to understand their mental operations, to apply consciously or unconsciously the principles and data of psychology to teaching.

We are establishing schools for the experimental education of children and we are teaching in our normal schools and colleges the results of the experimental education of all time. The study of education historically and experimentally has become the foremost subject of interest to the American people. We are more interested in educating our children, not as we were educated, but in a more effective, a more direct, a more truly practical and vital way. Our whole view of education is changing and rapidly improving. Industrial training, vocational training, technical training, the making of school life a vital experience preparatory to adult experience, and not a memoriter or text-book process; the formation of habits by doing things rather than by reading about them, the formation of ideals and purposes in life through community of life and effort in the school rather than by precept, the creation above all things of the inwrought belief that education creates no educational or intellectual aristocracy blinding to the eyes and deadening to the souls of its supposed possessors, but

prepares for the humblest and the truly great service of humanity; these are some of the results of recent experimental work in elementary and secondary schools.

Our colleges, universities, professional and other schools, and our institutes, the so-called higher institutions of learning, have sought to carry on research work in increasing quantities from year to year.

Prof. Louis Agassiz, who before coming to Harvard University, and while a professor in the College of Neuchatel, produced his greatest work—that on fossil fishes—studied the glacial phenomena of Switzerland and Western Europe, laid the foundations of the glacial theory, and became the leading naturalist of two continents. While at the University in Cambridge he continued to the last his researches into the zoology and geology of the American continent and established the Museum of Comparative Zoology. In like manner Prof. Asa Gray in botany, Jeffries Wyman in comparative anatomy, Josiah Cooke and Theodore W. Richards in chemistry, Benjamin Pierce in mathematics, W. W. Goodwin in the Greek language and literature, Charles R. Lanman in oriental literature, and their co-laborers at Harvard University have by their research work rendered immortal services to humanity. They have given standing to the University and at the same time have been among the great teachers of their time.

At Yale University, Professors Hadley in Greek, Silliman, Brush and Johnston in chemistry, Dana in geology and mineralogy, Woolsey and Phelps in international law, Whitney in philology, and Porter in philosophy have made undying contributions to human knowledge, literature, and law, and have given to the university which they loved and served a mighty influence throughout the length and breadth of our land.

In like manner, Professor Joseph Henry at Princeton in physics and electricity, Charles A. Young in astronomy, and William B. Scott in geology; at Columbia, Professors Newberry in geology, Chandler in chemistry, Pupin in electricity; at New York University, Prof. John W. Draper in physics; at the Ohio State University, Prof. Edward Orton in geology; John and Joseph Le Conte at the University of California, and in all our more influential colleges, universities, and institutes strong men, great teachers and leaders in their day, have given themselves to research work with zeal equal to that which they gave to instruction.

All of these higher teaching institutions are seeking larger endowments for research work and more members of their faculties who are

capable of research work of a high character and who are able to train their students for research. A college or university that has not men in its faculty capable of research work is unable to command the respect of the great scholars of the world; it is unable to teach the methods of research to its students, and to prepare men to become the scholars and leaders of the future.

Valuable as is the work of our colleges and universities there is no way in which their work can be so strengthened as by endowment funds, the income of which can be applied to research work, (1) by increasing the number of highly paid specialists who may divide their time between research and teaching, (2) by providing necessary apparatus, laboratories, books, and other equipments at the institutions themselves, (3) by establishing research stations, observatories, laboratories, and schools at distant points, and (4) by defraying the expenses of expeditions for field work, the collecting of materials and the making of excavations.

By such endowments the strongest men in their specialties are attracted to our universities and colleges, their intellectual life and purpose is quickened, and the character and purpose of the student body is uplifted. From the fourth until the twelfth centuries educational institutions taught what Aristotle taught. The spirit of research was dormant. Those were the dark centuries. Ours is a period of light and leading not because we have ceased to learn from the past—never before did a generation understand the past better than ours—but because we realize in a large measure our own shortcomings, the dangers that confront our national life, and have the spirit of research, of discovery, of reaching out into new and larger fields of usefulness.

In the second class of educational institutions, libraries, the spirit of research is already well developed. Our schools, colleges, and universities came to us earlier, many of them in the seventeenth and eighteenth centuries. Our public libraries are almost altogether the product of the last sixty years. They have served a rapidly growing, reading public with the literature which it has desired. They have aided the research student in an increasing ratio, both in the university, the college, and the professional school, and in the city and town remote from academic influence. Many of our libraries maintain library schools in which the science of library administration is discovered and taught in the interest of the public, and more particularly of the specialist who is doing research work. Our libraries gladly furnish

the means for investigation to the limit of their financial abilities and seek earnestly endowments, annual gifts, and public appropriations in the interest of research. They carry on research work of their own in local and national history, in local ethnology and in archeology, in manuscripts and illuminated texts, in the clay books of Assyria and the hieroglyphics of Egypt, in the sources of folk-lore and the origin of myths, in the history of the fine arts and in the beginnings of religions. As our libraries come to have larger and better equipped buildings, increased public support and endowment, we may expect the spirit of research will not be less in the library than in the college or the university; and that spirit of research will have a beneficial effect on the communities served by the libraries, aiding the public to develop that spirit of discovery necessary to the larger life of the future.

Museums, forming our third division or group of educational institutions, are in this country of recent origin. The Museum of Comparative Zoology in Cambridge was incorporated in 1859, only fifty-two years ago; the Boston Society of Natural History entered its present building in 1863. The Boston Museum of Fine Arts, incorporated in 1870, entered its building on Copley Square in 1876. The American Museum of Natural History, started in a small way in 1869 and entered upon its present site in 1876. The Metropolitan Museum of Art, incorporated in 1870, entered the first section of its permanent home in 1880.

The museums west of the Appalachians are younger still, several of the larger of them having been established less than two decades ago. The work of establishing and developing museums as great educational agencies is yet in its formative stage. Their purposes and functions are being discovered. Their buildings and equipments are in the process of evolution. With but few exceptions they have ceased to be merely exhibition halls with collections arranged in conventional order. They are fast becoming places for the fundamental instruction of the public—the habitat of the student and specialist. Their laboratories, ateliers, work-shops, study collections and materials for original research occupy one-third of their entire museum space.

The museum lends itself naturally and necessarily to research work. The identification of species, the certification of authenticity to a work of art, the classification of objects in every department of the arts and sciences, the writing of accurate descriptive labels are labors all more or less of a research nature. The collecting of specimens in

natural science, the unearthing of fossils in a distant state or country, the excavation of mounds in Egypt or Assyria all lead to research work, both in the field and upon the collections when they reach the museums. Vast have been the results of these researches of the elder and younger Agassiz for the Cambridge Museum, of Professor Marsh for the Yale Museum, Professor Osborn for the American Museum of Natural History, of Professor Scott for the Princeton Museum, of Professor Heilprin for the Museum of the University of Pennsylvania, of the scientific bureaus of Washington for the Smithsonian Institution and the National Museum, of Dr. Dorsey for the Field Columbian Museum, of Professor Goodyear for the Museum of the Brooklyn Institute of Arts and Sciences, of Professor Morse for the Salem Museum, and of Professor Putnam for the ethnological collections in Cambridge, New York, and California.

A study of twenty-four of our larger and more widely known museums in the United States is of interest in this connection. These twenty-four institutions hold, in addition to their buildings and equipment valued at $48,455,000 and their invaluable collections, endowment funds amounting to $25,236,314.57, and their total annual income for the year 1910 was $2,159,502.20. These institutions already hold endowment funds, the interest of which must be expended on original research, amounting to $1,246,600, and they hold unrestricted endowments, the income of which may in addition be expended upon research, of $6,529,493.79 making a total available endowment for research work of $7,776,093.79, or nearly one-third of their entire capital funds.

In the year 1910 the income which these museums were compelled by the terms of gifts or bequests to expend on research work was $80,532.38, and the amount actually so expended was $171,514.88. And this expenditure does not include the costs of scientific expeditions, explorations, archeological excavations, nor the purchase of collections, however much material for research they might possess. The stronger and the younger museums are those that as a rule are doing the most research work.

The foregoing figures, impressive as they are, furnish only a partial statement. The National Museum at Washington is a great center with which the scientific bureaus of the national government are associated. These bureaus, whether under the department of agriculture or the interior department, are continually engaged in scientific researches which bring vast and beneficial results. In like manner our state museums at Albany, at Columbus, and elsewhere, are vitally

related to the research work going on in geology, mineralogy, agriculture, ceramics, ethnology, and industrial arts, in their respective states.

The directors or curators of these twenty-four representative Museums have replied to the inquiry "Do you need greater endowment of your museum for research?" as follows: *Two*, "We are only a museum for the exhibition of works of art," and *twenty-two*, including our largest museums of art, with an emphatic "*Yes!*" And these heads of our museums, with the largest and best experience in museum work of any men in our country, give excellent reasons for their attitude to the institutions which they administer and direct.

Research is necessary to the proper organization, classification, labeling, and description of collections of every character, and to the end that the collections may teach what is valuable in them.

Research work increases the collections of a museum in a most vital way, making it possible that the results of research in a given museum may be shown to the public and to students by the authors of the researches themselves.

Research provides a museum with valuable material for publication, material that will be sought by scholars in all parts of the world, that will give standing to the museum and respect for the service which it renders to humanity.

The museum that encourages research work will secure the services of the ablest men in their specialties—men who would be unwilling to give their lives to museum work unless they could add thereby to the sum of human knowledge. The director of one of our largest and most progressive museums states that every member of his staff gives a part of his time to research work, by preference, and that he is encouraged to do so.

But research work in a museum is a necessity on a broader ground than any of these, on a ground that includes them all. An institution is like an individual; if a man has the spirit of research in him his influence is felt by all who come to know him directly or by his work. A museum that has the spirit of research in it influences an entire community, gives to that community the spirit of research, the desire to discover the truth, the desire to push out into new fields of activity, of industry, of invention, making use of new applications of principles, new methods of using energy, new ways of preventing disease, new modes of wave motion, and establishes new theories of the constitution of matter, new proofs of evolution, biological and astronomical.

It is by inculcating this spirit of research that men are led to work out rational beliefs as to the nature and destiny of man, as to duty and responsibility as between man and man. The museum that prompts not to research lacks the chief reason for its existence.

The fourth class of educational institutions give themselves entirely to research. These we would welcome as we are in no danger of expending too great energies or resources in research work. And there is something to be said in favor of research work pure and simple. Some men—very few—are qualified for research work alone. Most men do better research work because they are teachers as well, either as college or university professors, or as creators of teaching museums. Because we have such splendid institutions as the Carnegie Institution, the Rockefeller Institute, and the Smithsonian Institution is the more reason why our museums, our universities, and other educational institutions should redouble their research work, and this, as we should expect, is precisely what they are doing and are striving more and more to do.

We need to recognize more and more how futile, comparatively, is most of the routine work that goes under the name of education, and seek to emphasize the importance of initial action, of organizing minds, of men capable of creating better conditions of living and nobler aspirations. In this work the museum has a vast field of usefulness.

President Skiff.—"Do any members desire to discuss the very excellent paper that has just been presented?"

Mr. Wm. M. R. French (*Art Institute of Chicago*).—"A paper which embodies so much study and attention can scarcely be really understood and comprehended in a single hearing. I look forward to examining it when it is printed. I suffer from self-reproach, as to the matter of research, but you might almost as well ask an officer of a military force in active service to engage in research as to ask a museum official who is situated as I am, to study, in view of the urgent necessity which presses upon us. I suppose every educated and enlightened person perceives that research is most important and that it should be done. We have no provision for research in our institution as yet. In all of these discussions we find differences of opinion. If you mean by research, studying installations and the like, of course, we must do that, but no work of a practical sort. I have really no comment except an apology to the lecturer and the Association and myself for the small

amount of research which we are doing at present in our Art Institute. Our research has been mostly provided by experience. We get a good deal of knowledge of one kind or another, at least we form strong opinions, for example, in the matter of the arrangement of museum buildings, backgrounds for specimens, and the matter of labels. On certain of these, our views are more or less definite.

"Last evening at the round table, discussing our trials, I was almost moved to get up and discuss them as a woman at the prayer meeting did. She said 'I have a good many troubles, but they do not trouble me much.'" (*Laughter.*)

Treasurer Wilson.—"I would like to ask one further question. I listened to the most admirable discussion last evening by Miss Griffin of the methods of interesting children in natural history and making the beginning of investigators of them. I would like to know if this method of work, which is being pushed more or less in a new way by her, is not original work, is not investigation. The discovery and application of such methods all over the United States would make the greatest possible difference in the advancement of our civilization."

Secretary Rea.—"May I add just a word to Dr. Wilson's remarks as a concrete illustration of the suggestion he has made regarding the relation of instruction of children and research work? In my work in the southeast, I have found it necessary to do much research work through children. In our educational work we have taught children to become interested in birds and in the fauna of our coast. For instance, a party of half a dozen school boys goes across to the island seashore and comes back with material gathered on the beach. I look it over and find a sand eel which has never been reported north of Key West. Again the boys come in with a report of a species of bird which has never been known in the state before, and on being told that their observation is of no scientific value until they produce a specimen, they work carefully until they obtain one. One boy only fifteen years of age has been waiting for two years to prove that the American Merganser inhabits South Carolina, because two years ago he saw one but never told us about it until he came in with a specimen, which he made into a most beautiful skin. Those boys are becoming scientists. They have already done work which I think anybody would be glad to claim as research work. Yet it is simply a phase of our educational work." (*Applause.*)

President Skiff.—"I am prepared to go further than the Secretary has just gone. If the instinct of the human being in this age is not the acquisition of knowledge, if his mission on earth is not to seek the truth, then he has little occupation in his life. The fact is, we are all seekers for the truth."

The following paper, by Dr. George F. Kunz, honorary curator of gems, American Museum of Natural History, was then read, in the absence of the author, by Dr. Frederic A. Lucas:

TO INCREASE THE NUMBER OF VISITORS TO OUR MUSEUMS

A legitimate popularization of museums should be a great factor in stimulating an interest in the various sciences and arts, in improving the public taste, and in bringing to the museum friends, and, frequently, financial support.

The fundamental difference between museums on one hand and circuses or theatres on the other, lies in the fact that the former represent life in repose and the latter life in action. A man painting a sign will draw a greater crowd than can be attracted to the mere exhibition of an oil painting by a capable artist. This suggests the idea that the galleries of our natural history museums might be enlivened by the introduction of phonographs or megaphones near the museum case so contrived that if one stepped on a board something in the mechanism would be released, and the realistic roar of a lion or a tiger, or the note of a rare bird would issue forth. The impression produced on the visitor would be duly effective, a simultaneous appeal being made to the senses of sight and hearing. Moving pictures again would be exceedingly useful for the purpose of illustrating the movements and habits of animals and birds, insects, etc., especially in the case of the rarer varieties. The moving picture men make great fortunes by showing contrivances at the price of one cent for admission, and the museums might well take advantage of the facilities the pictures offer for illustrating their exhibits. Museums not provided with adequate funds to purchase their own instruments might easily make arrangements with the moving picture people, and would thus make their exhibitions more successful.

We all know that the wonderful changes which have taken place in the presentation of exhibits have added materially to the present

number of visitors to our museums, but for all that the New York Aquarium has more visitors than the three largest museums in the country. The wonderful bird groups and animal groups in the American Museum of Natural History and the Field Museum of Natural History showing the birds and animals in their natural environments, whatever they may have cost, have always been an investment bringing large returns to these museums. Even the placing of a hive of bees on the window of a museum or a school will do much to create an interest in entomology that otherwise might not be appreciated. It might be well to show linnets, wrens, or sparrows in their nests and other things in the same manner.

The privilege of holding their meetings in museums should be freely accorded to scientific societies, just as is now the case with the various affiliated sections of the Academy of Sciences. The constantly changing groups of people thus brought to the museums would give the best possible opportunities for displaying their valuable exhibits, and would give to ever-widening circles of people the best and most instructive kind of entertainment.

The holding of various special exhibitions at certain periods of the year to which at the opening only members of the museum and distinguished residents are invited, the general public being admitted later, has worked remarkably well in the case of the Metropolitan Museum of Art, the American Museum of Natural History, and other museums.

The announcement of accessions to the daily press, especially when accompanied by photographs prepared before the representatives of the press are invited to see the exhibits, has done a great deal toward popularizing the American Museum of Natural History and the Metropolitan Museum of Art. The holding of special exhibitions, such as the Tuberculosis Exhibition in New York, the exhibition of Dutch paintings at the Metropolitan Museum of Art in connection with the Hudson-Fulton Celebration, the new exhibition relating to hygiene, and other exhibitions not directy related to the museum where they are held, has done and will do much toward familiarizing the general public with the museums.

Many people have never been in any museum outside of their own city, and yet, with proper encouragement, these same people might become visitors and patrons of such institutions. To attract visitors from other sections would do as much to increase the prestige of a museum as it does to augment that of a church or any other institu-

tion. That the public like action is well understood by the show-men and those who manage camp-meetings, revivals, etc. Of course, the museums need not go to such extremes, but the bringing of more life into them, and the simplification of labels describing exhibits, so that they may be easily understood by those unfamiliar with strictly scientific nomenclature, cannot fail to make the museums more popular than they are at present. The appointment of committees in the numerous schools to take an interest in collecting or to act as guides through the various museums, would mean an education to the young, and would at the same time give the museums a period of greater usefulness.

A striking example of the successful popularization of an institution is afforded by the New York Zoological Garden. One of the curators is a past master in the art of finding interesting and instructive items for the press, while the placing of bulletins in the subway and elevated stations has done much to attract visitors.

Mr. Henry L. Ward (Milwaukee Public Museum).—"Mr. President: The remarks of Dr. Kunz regarding the use of a phonograph may appear somewhat ridiculous to part of the audience. About three or four years ago I took up the question of museum work in a paper before the Wisconsin Academy of Sciences, Arts, and Letters, and there referred to the use that might be made of phonographs in museums. Those who have had experience with large colonies of animals, such as sea lions or birds, must have been impressed with the fact that the characteristic sounds of those colonies were quite as effective in giving the general impression that was carried away as the mere sight of the animals themselves. If, as Dr. Kunz suggested, by stepping on a board or pressing a button one could have a proper reproduction of those sounds, it would certainly make any group representing those particular animals very much more effective than it possibly could be without them. The use of live specimens, I think, is becoming much more general from year to year.

"What he speaks of is so apparent. One cannot pass down the street where there is a man in the show window, putting on a patented suspender or collar button or something of that sort without being impressed with the fact that people will stop their haste and stand around to see what is going on. Action of any kind attracts attention. What we must have in a museum is the attraction of attention.

When we get the attention we hope to give visitors something that is of more interest than the fixing on of a collar button."

President Skiff.—"Wouldn't that be converting our museums into zoological gardens?"

Mr. George Francis Dow (*Essex Institute*).—"Are we not doing that in part in some lines today? You will see two or three furnished rooms in the Essex Institute. Years ago the articles of furniture would be placed with geometrical or mathematical precision. Now, we contemplate them in their relative positions. The old way was to have the specimen placed upon a platform. Today we put it in its relative position as associated with other articles of the furniture of a room. It at once takes on a new significance, becomes almost a living object. I was struck, two years ago, with the interest with which young boys and grown men were imbued, in connection with the examples of machinery shown in South Kensington, and also at Edinborough. By pressing a button electric current was applied, and the diminutive machines were at once put in action. Now, of course, it was full of interest to see the thing move. That is in line with what has been spoken of, putting life in the object and making it appear realistic."

President Skiff.—"I would like to say just a word myself on that subject. I believe that the phonograph, when it is improved, as it undoubtedly will be, will be valuable, but not necessarily in the lecture hall or the classroom, for the purpose suggested, of bringing out the notes of birds or receiving the sounds of animals or aborigines. Dr. Kunz suggests the automatic spring board phonograph. I can see a class of two hundred and fifty children starting to amuse themselves with a considerable number of those phonographs, ready for their use. What a noise and confusion would result! I can leave it to the imagination. As far as giving life to nature is concerned, I am very glad to do as we have in the past, and leave that to the botanical gardens and zoological parks. I am trying very hard now in Chicago to have in what we call the outer boulevard system, in which public interest has been aroused, an aquarium, a botanical garden, and a zoological park for research and study purposes. I think that the aquarium will be established in Jackson Park, in which event, I hope that our ichthyologist will have charge of it. I think this institution and the museum should be brought closely together, both for science and for the education of the public. I believe that we should keep our museums not unwelcome and not too sedate, but I think

that the person who is induced to come in with the idea that he is going to acquire knowledge, is a much better subject to work on than the person who is cajoled in by an electric sign or a funny noise. I think the way to get the children from the public schools is to instruct the teachers how to get them in."

Dr. W. J. Holland (*Carnegie Museum*).—"Pardon me for speaking so often, but what you have last remarked reminds me of the Jardin des Plantes in Paris, which a great many of you have seen. The director of the museum, Edmund Perrier, has charge of the zoological gardens, the museum of paleontology, the museum of mineralogy, the museum of botany, and so forth. All of these institutions are collocated. You can see specimens in the museum, you can walk out of the museum into the gardens, and a few steps away you can find the living animals pacing to and fro in their cages. That seems to me a very happy combination. Your idea of having Chicago converted into a Paris is one that will lead us all sooner or later to go and reside in Chicago." (*Applause.*)

President Skiff.—"To put the thing somewhat epigrammatically, the zoological park is for the passing instruction of a not particularly studiously inclined individual, while the museum primarily is for the student, the man who is devoted to some subject in natural science, or to some industrial or technical trade. That is what they are for. That is what they should be used for. You have to engage the attention, even the thoughtless—but sometimes the thoughtful—attention of certain classes, but to undertake to animate the study material seems to me not exactly the way to proceed."

By special request the following paper by Dr. Frederic A. Lucas, curator-in-chief of the Museums of the Brooklyn Institute of Arts and Sciences, was read by title, with leave to print:

MUSEUM LABELS AND LABELING[1]

The past twenty-five years have witnessed great changes in our public museums, due to a recognition of their educational possibilities and of the needs and rights of the public. These changes are naturally most apparent in the character and quality of the objects

[1] Reprinted, by permission, from *The Printing Art* for August and September, 1909. As originally printed, this paper included reproductions of labels in use in the United States National Museum and the Brooklyn Institute Museum.

displayed and the manner in which they are shown; they are most evident in museums or collections of natural history, largely because this class of material presents the greatest possibilities in the way of exhibits that are at once systematic, educational, and artistic. Moreover, this is a class of material with which everyone is more or less familiar, and which, with due respect to our artistic brethren, therefore appeals directly to the greatest number of visitors.

Changes in the scope and character of museum exhibits have led to equally great changes in labels and methods of labeling, and this branch of museology, formerly almost neglected, is now considered of prime importance. Nowadays no large museum can be considered as complete in its equipment if it does not include a printing plant that bears fruit in the way of labels, and it has seemed well to call attention to this comparatively new branch of the printing art in a series of articles on "Labels and Labeling." While these subjects are here presented from a viewpoint of the naturalist, yet there are certain principles that apply to all classes of objects, be they the creations of nature or the handiwork of man.

It is a truism to say that nothing should be exhibited in a museum without a purpose. If there is no good answer to the question, "Why is this object displayed?" then the specimen should be retired and the space it occupies devoted to something else. This applies to art as well as to natural history, and it should be one of the aims of a label to explain why the object is shown. There are those who consider that objects of art need no labels, that their mere beauty is sufficient justification for their exhibition; but this I believe to be a sad fallacy.

It was once my pleasure to visit an art museum in company with the director of another large museum. This art museum contained a collection of pottery said to be the largest and finest of its kind in existence, and as fairly intelligent visitors we wished to know something about it. What did we learn? Nothing. Here and there was a label bearing a date; here and there one bearing a name, presumably that of some locality, although the names were all strange, and in the absence of a map they might possibly have been the names of the makers. As to the objects of the collection, whether the jars were made for use, for ornament, or for sale; what were the finest or rarest glazes; wherein the work of one maker differed from that of another—as to this we learned absolutely nothing.

The purpose of the label, then, is to state important or interesting facts about the object to which it is attached or to which it relates;

to supply information that cannot be obtained by simply looking at the specimen itself. This information should be given as concisely as is consistent with the use of good English, for while the literary style of the label may not be so important as the information it contains, yet for the purposes of the label and for the interest of the reader it should read smoothly. The literary side of a label should ever be kept in view.

A label consisting of many short paragraphs not only looks badly but reads badly, having much the same jarring effect on the mind that the jerky motion of a street car has on the body when the motorman is trying to run slowly and yet avoid coming to a dead stop. On the other hand, the sentences on a label should not be too long. If they are, many a reader will fail to carry the train of thought which is conveyed, or is intended to be conveyed. Furthermore, the information should be given consecutively; that is, the same kind of information should not appear in two places. For example, a statement of where an animal is found should not be placed in the middle of a paragraph telling what the animal does. This, by the way, is a common fault, not only of writers of labels, but of encyclopedia or other short articles. Information is given as it occurs to the writer, without any regard being paid to the important question of continuity. The natural tendency of this mixing up of information is to confuse the mind of the reader and prevent him from obtaining a clear idea of what he has read.

It may be safely set down that the first question a visitor asks about any object is, "What is it?" If further queries are propounded, they most probably would be, "Where does it come from?" "What does it do?" or "What is it used for?" Therefore, the name of the object comes first on any label, and the first part of any descriptive matter should be devoted, if necessary, to explaining what the animal or object is. In the case of unfamiliar animals this is best done by a reference to some animal with which the reader is presumably more or less familiar, in order that it may serve as a term of comparison. Just here is where the writer of natural history labels often and unavoidably comes to grief, partly because so many animals have no common names and partly because the reader knows no animal to serve as a term of comparison.

To once more answer the oft-asked and oft-answered question, "Why don't you give these animals common names?" it may be said that common names are like the trees at Chickamauga—there are

not enough to go around. Furthermore, the only common name available may be a foreign name, as absolutely without meaning to the reader as a Latin name could possibly be. For "common" put "familiar" and the situation is explained. Many strictly scientific names are considered "common," or popular, because they are familiar; such, for example, are Boa Constrictor, Rhinoceros, and Hippopotamus, while others, like Elephant, Tapir, and Antelope, practically retain their Latin form, having suffered the change of only one or two letters.

Technical terms and technical language should, so far as possible, be avoided, because they not only mean nothing to the ordinary visitor, but discourage him from reading labels. It is not always possible to avoid them altogether, for, as in the case of labels giving the characters of groups of animals, and especially of invertebrates, it may be absolutely necessary to employ technical terms in order to properly characterize the groups shown.

Neither the objects shown in the museum, nor their labels, are for any one class of visitors; and while the vast majority of people seek a museum for no other purpose than amusement, the thousandth or ten-thousandth man comes with a more serious purpose, and his needs must be provided for. But for ordinary use the principle laid down long ago by Professor Bickmore not to use a six-syllabled word when two or three syllables would do as well is good and is to be commended to many of our younger writers.

While a large number of museum visitors, perhaps one might say the vast majority, care to know little more about a specimen than its mere name and possibly where it comes from, there are others—and in the aggregate these others number thousands—who wish to know something further, and for the benefit of these, and in the hope of adding to their number, a label should, as the case may be, tell something about the habits of an animal or the uses or history of an object. This may be little or it may be much, and the end in view may be attained in various ways, either by a single long label or by a number of short labels referring to different objects or subjects. In a long label the more important or more general information may be given in large type for the benefit of the average visitor, the needs of the visitor of an inquiring turn of mind being met by descriptive matter in smaller type, this being the plan adopted by Dr. Goode. Or, in the case of a number of related objects, there may be a general descriptive label and short labels on the individual specimens. Still another plan

is to have several labels, each of which deals with some topic indicated by a bold headline. Such a method was adopted in the group of Fur Seals in the Brooklyn Museum, where the main label gives the name and locality of the seals and the names of their donors, while other labels deal with seals shown in the group, classes of seals, sealers' terms, and pelagic sealing.

Some objects lend themselves to labeling much better than others, and some defy the most persistent efforts to say something about them. For example, shells are very difficult things to label because in the vast majority of cases there is nothing of special interest in their habits or in the use made of them.

Exactly the reverse is true of historical objects, whose sole value or interest often lies in their associations. The wearing apparel and other "relics" of famous men are of no more value than any other old clothes, and but for their associations would be cast on the ash heap. In such cases the label is more important than the specimen.

As there are certain things which should be stated on a label, so there are others that should be omitted, and time and space should not be wasted in stating that which is perfectly obvious; as for example, that the Scarlet Tanager is a beautiful red and black bird. Neither is it worth while to record unimportant measurements, for the visitor is not interested in knowing that a certain animal or a certain vase is sixteen and one-half inches long, or high, as the case may be. Important measurements, such as the height of a mammoth, the length of a whale, or the size of the largest specimen of its kind, are different matters.

If it is the function of a label to convey information, it is important that it should be so printed and so placed as to be easily read. In fact, like the famous controversy as to whether the claim of priority should be decided in favor of the egg or the hen, it is a moot question whether it is more important for a label to say something or to be legible, with the odds in favor of legibility, since it obviously matters little what is on the label if it is so printed or so placed that it cannot be read. The conflict between looks and legibility is often serious and leads to some inconsistencies and many compromises. The curator of an esthetic turn of mind will frequently decide in favor of looks, with the result that his carefully written labels are practically useless, because the type is too small, the body of the label too dark, or the label itself placed so high or so low that it can only be read with the aid of a stepladder or a prayer rug. The practical minded curator

will sacrifice his artistic temperament to the public good, have his labels printed in good large type on a light ground, and put them where they may be read. This last is not always an easy matter, owing to physical obstacles presented by the specimen or its surroundings, but usually some way may be found out of or around the difficulty. It has been said that every case should be provided with some space suitable for the attachment of a label, but this advice is much easier to give than to follow. Many cases are built with a definite end in view, but many more are constructed on general principles, with merely a knowledge of the class of objects they are to contain. Furthermore, two or three cases may be of similar design and contain similar classes of objects, and yet one case may need a label a page long and the others require only a few lines.

The writing of advertisements is said to be an art, and the writing of museum labels may well claim to be placed in this category also. The object of a label is to so far as possible forestall the principal questions that a visitor may ask, and further, to convey information that will arouse his interest and lead him to seek for further knowledge. To do this, to say what one wishes clearly, concisely, and smoothly, to have a label at once exact in its statements and at the same time free from technical terms, is no easy matter, and many a label is allowed to pass, not because it is satisfactory to the writer, but because at the moment it is the best that can be done.

Nothing is easier to write than a technical label. Anyone equipped with moderate intelligence and a few text-books can turn out such labels without much thought. To write an interesting and popular label is often a difficult matter.

More than fifty years ago Edward Forbes wrote that "The great purpose of museums is to stimulate the observant powers into action. The educational value of museums will be in exact proportion to their powers of awakening new thoughts in the mind." And the ideal label should do as a unit what the museum should do as a whole.

Many questions in regard to labels and labeling, including those of the best type and best materials, are still far from settled; in fact, the present conditions in museums are of such recent date that there is no consensus of opinion even as to methods of arrangement and installation. Still, just as there are certain general principles that apply to the labeling of a collection, so there are certain principles that apply to type and cardboard. If a label is to be placed where it may be easily seen and read, it is not enough for it merely to impart

information, even if this is done clearly and pleasantly; being in a conspicuous place and continually in the public eye, it should be not only easy to read but agreeable to look at, of good material, and well printed. Here we get at the very outset an intimation of another frequent source of conflict between looks and legibility, for starting with the axiom that a label is made to be seen, it is evident that the label that is fairest to look upon may not be the easiest to read.

Moreover, there are various other obstacles in the way. Labels must be printed in numbers, and should, like soldiers, have some uniformity of appearance. Being thus turned out in quantities, there is some restriction as to the cost of material. There are other restrictions in the way of what may be called the inelasticity of types—the fact that they cannot be stretched where a line is short, or unduly compressed where a line is long, and the larger the type, as in the case of headlines, the more seriously is this limitation felt. There is also the question of the relation between the character of the label and the character of the object to be considered; black and silver may look well on minerals, but not on mounted animals, nor on rude ethnological objects, and no one would dream of putting buff and black labels on porcelains. There is, too, the relation between the size of the label and the size of the object to be thought of, so there is a variety of complications to be dealt with.

It is doubtful if the public realizes the difficulties in the mere matter of color—the trouble in securing a color that is in itself agreeable, that will harmonize with the majority of objects, that will not fade, and that will take ink readily. Plain black and white, which is the most legible, must be ruled out for various reasons. It is obtrusive to begin with, is readily soiled, and turns brown with age and exposure to light. Owing, therefore, to the very important considerations of printing labels in considerable numbers and that may be easily read, the question of material has been practically limited to some smooth board of light color, but not white, and the color most frequently employed is buff.

Aluminum ink on black has been extensively used in museums, and the effect, for certain classes of objects, minerals, for example, is good. The fact remains, however, that this style of label is by no means so easily read as black on buff, and to produce anything like parity between the two the black label must be several sizes larger than the other. Gold leaf on black is the best for large headings, but aside from cost, is somewhat troublesome to manipulate, so that the use of

this class of labels must be restricted, as they cannot be turned out with sufficient rapidity to supply the demands of a growing museum. Gold bronze on black does very well for the majority of art objects, leaving gold leaf for large headings. Black on gold is most admirable for many small art objects, particularly for picture tablets, and it could be used to great advantage in collections of Oriental objects. Unfortunately there seems to be no gold board available for this purpose, and there are probably practical difficulties in the way of manufacturing at a reasonable price a dull gold board that shall hold its color. If it can be done, it would be a boon to museums. A picture tablet with only a few lines of type may be replaced when it becomes tarnished, but it is another thing to replace scores of labels.

Here let me say that the practice of lettering directly on the picture frame is objectionable. It is done on the theory that it avoids placing a label on the picture, but this is merely whipping the devil around a very small stump, where he is in full sight all the time, and puts the label on a place not intended for it.

As concrete examples are always better than general statements, attention is called to the labels of the United States National Museum and of the Museum of the Brooklyn Institute, in each of which the writer has had some little experience, and in each of which efforts have been made to secure the best results. The former institution started with a carefully formulated plan, not only for the material and type for labels of various kinds, but for their sizes as well. Like many plans, this proved better in theory than in practice, and Dr. Goode, who devised it, believing that it is better to be true than to be consistent, allowed great departures from the original scheme. Predetermination of the size of a label is an impossibility; the label must be adapted to the object and to what it has to say, and in some collections it is literally true that no two objects call for labels of the same size. To decide upon the size of labels beforehand results, to paraphrase the well-known quotation, "in many an oasis of text in a desert of margin."

The material first chosen for labels in the United States National Museum was a rather thin, dark yellow board, too dark to be called buff, and the type a lightfaced, graceful French letter. This combination was open to several objections: the cardboard was so thin that it readily warped, while the type was so lightfaced that it could not easily be read. The labels might be called esthetic after the standards of the "Patience period," but undignified, and the large labels were

particularly poor and weak, the general effect being "cheap and nasty." Nevertheless, this was the material and type employed in the main for many years. Another style of board and another style of type was used in some departments of the museum, particularly for small labels, the board being a light gray with a dull hard surface that neither paled nor browned, and the type Gothic, a combination that was legible and permitted the use of comparatively small labels.

About 1895 a special lot of heavy, pure manila board was made for the museum, the surface being dull, slightly uneven, and with a faint grain. It was fair to look upon; in fact the best looking label that we have ever seen, and it held its color, but it had one serious drawback, not to say fatal defect—it did not take ink well, demanding a liberal supply of the best quality of ink and great care in printing. It was necessary to run labels of any size through the press at least twice to obtain good results, and large numbers of labels were returned to the Government Printing Office on account of their faint impression. When the original supply was exhausted a second lot was ordered. This was three-ply, the center being plain white; but while the surface lost something in character, it was still good. The third lot of board was worthless, some material other than manila having been used, so that the fiber was lacking and the color dirty yellow instead of a warm buff.

In some departments of the National Museum, black printed with aluminum ink was used, and for some special headings a light terra cotta wall paper mounted on boards was very successful. For general headings gold leaf on black was employed throughout the museum.

In the Museum of the Brooklyn Institute a light buff, smoothfaced board termed "Royal Worcester" is used for the Department of Natural Science and for a large number of labels in the Department of Ethnology, aluminum on black being used for others. Black on gold is used for picture tablets, and gold bronze on black for other labels in the Department of Fine Arts. DeVinne type is used throughout.

The choice of this type is a good illustration of the fact that the character of the labels for the entire museum, or at least for one of its departments, may be practically determined by a comparatively small number of labels, for once type has been bought, it may be inexpedient or impracticable to subsequently change it. In the Museum of the Brooklyn Institute the selection of the above-mentioned board and type for the first few labels determined the character of thousands of

others, though on the whole it would seem difficult to improve on this combination.

In the matter of type I confess to a strong liking for Gothic, as it is compact and clear, free from little points, and easily read; for large labels and bold headlines there is nothing superior to DeVinne wood type.

For a special case of corals, a pale green board and dark green ink have been used with good success; and for large labels in the exhibit of corals, where the background is dark green burlap, it is probable that dark green cover paper and aluminum bronze may be used, although it will be necessary to back them to prevent warping.[1]

Having decided what the label is to say, and determined upon the type and material, it remains for the printer to give it form and substance. It is, of course, obvious that as the name of the object is the first thing the visitor wishes to know, it naturally comes first and in the largest type, whether the label consists of two or three lines, or is a long descriptive label, such as was advocated and extensively employed by Dr. Goode; the relative importance of the other matter governs the rest of the label.

If a label should read smoothly it should also look smoothly, and the curator must depend on the art of the printer to give at once due prominence to the important facts and at the same time keep them from unduly elbowing their way into notice; to eke out the short paragraphs and condense the long ones, and to so juggle the type that an important word or title is not cut in half. Much indeed depends on the resourcefulness and intelligence of the printer in translating into type the ideas or desires of the writer, who, be he never so experienced, may not always be able to tell exactly what is needed to make a label look well.

Here is found one of the important reasons for having the printing of labels done in the museum. It is frequently asked, "Does it pay to have labels printed in the museum?" "Would it not be cheaper to have it done outside?" If it were a question of now and then printing a small number of diverse labels, or a large number of labels similar in style, it might, as a mere matter of dollars and cents, cost less to have them printed outside of the museum; but when it is a matter of printing scores of labels, aside from other matter, varying

[1] Here come in a number of matters connected with the using of labels—questions of frames, passepartouts, and label holders; but to employ the much-used, though still usable quotation, "that is another story."

in size and style, and of printing them in the best possible manner, there can be no doubt the place to print them is in the museum and under the eye of the curator.

Finally, before the question of mere looks should be placed the legibility of the label and the consideration of the visitor for whom the label was written and printed. Nor blame the director too hastily if the views he expresses are not always carried out; the most placid river flows over many rocks and snags, and the desire to live out his days in peace may lead the director, like the minister, to exclaim "Do as I tell you, not as I do."

The report of the Auditing Committee was then read by Mr. Henry L. Ward, chairman, and the report of the Treasurer was ordered approved.

The Secretary then read a letter from Dr. Henry Fairfield Osborn, president of the board of trustees of the American Museum of Natural History, inviting the Association to hold its next annual meeting in New York City and to be the guests of the American Museum for at least one day. Dr. Lucas stated that a similar invitation had been extended at the meeting of the Council by Mr. Edward Robinson, director of the Metropolitan Museum of Art. Dr. Lucas also stated that he was authorized to extend an invitation to the Association to spend one day at the Brooklyn Institute Museums. The Association then voted unanimously to meet in New York City in 1912.

Secretary Rea then read the following resolutions, which were unanimously adopted by a rising vote:

Resolved, That the sincere thanks of the Association are extended to the Boston Society of Natural History, to the authorities of the Museum of Fine Arts of Boston, of the Harvard Medical School, and of the Arnold Arboretum, and to the local committee of arrangements representing these institutions who so hospitably and generously, during the sessions of May 23d, provided for the comfort and instruction of the visiting members of the Association.

Resolved, That the sincere thanks of the Association are extended to the authorities of Harvard University and to the officers of the Fogg Art Museum, the University Museum, and the various other museums of the University for the generous hospitality extended to the Association and the pro-

vision made for the entertainment of the body during the sessions of May 24th.

Resolved, That the sincere thanks of the Association are extended to the officers of the Peabody Academy of Science and of the Essex Institute, and the local committee of arrangements for their exceedingly gracious and hospitable entertainment of the Association on the occasion of its visit to Salem on May 25th.

Resolved, That the thanks of the Association are cordially extended to Mr. John E. Thayer, owner of the Thayer Museum of Lancaster, Massachusetts, to the officials of the Archeological Museum of Phillips Academy, Andover, to the Trustees and officers of the Worcester Art Museum, the Museum of the Society of Antiquity, the American Antiquarian Society, and the Worcester Society of Natural History, and to the authorities of Wellesley College for their cordial invitations extended to the members of the Association to visit the institutions which they represent and on behalf of those of the membership who may be able to accept these invitations our sincere appreciation of the proffered hospitality.

President Skiff.—"I believe that concludes the regular session of the Association, but before the motion is made to adjourn *sine die*, I must really return to you my sincere thanks not only for the honor of election to the presidency for the past year, but for the great courtesy and good nature with which I have been treated as your presiding officer. It has all given me unusual gratification."

On motion duly made and seconded the Association adjourned to meet in New York in 1912.

APPENDIX

CONSTITUTION OF THE AMERICAN ASSOCIATION OF MUSEUMS

ARTICLE I

NAME

The name of this Association shall be "The American Association of Museums."

ARTICLE II

OBJECT

The object of this Association shall be to promote the welfare of Museums, to increase and diffuse knowledge of all matters relating to them, and to encourage helpful relations among Museums and those interested in them.

ARTICLE III

MEMBERSHIP

All Museums officially represented at the first meeting of this Association, held at the American Museum of Natural History in New York, on May 15, 1906; all persons taking part in the organization of this Association, or who on the above date, or prior thereto, have by letter signified their wish to become members of the Association, shall become Charter Members on payment before the next annual meeting of the Association of the fees hereinafter provided for.

The Members of the Association shall be Active, Associate, Sustaining and Honorary.

Persons actively engaged in the work of Museums may become Active Members on the payment of three dollars per annum, and may become Active Members for Life upon payment of thirty dollars at any one time.

Persons contributing one dollar per annum may become Associate Members.

Each Museum paying not less than ten dollars a year shall be a Sustaining Member of the Association, and through its chief executive officer or a properly accredited representative, shall be entitled to cast a vote on all matters coming before the Association.

Persons distinguished for eminent services, either to the cause of Museums or to this Association, may become Honorary Members. The number of Honorary Members shall be limited to fifteen. When ten Honorary Members have been elected then thereafter not more than two such members may be elected annually.

Active and Sustaining Members only shall have a right to vote, and Active Members only may hold office.

Any Museum or person proposed in writing for Active, Associate, or Sustaining Membership by a Member of the Association, and approved by the Council, upon the payment of the proper fee shall become a Member of the Association.

Any person contributing five hundred dollars or more at any one time shall become a Patron of the Association.

ARTICLE IV

OFFICERS

The officers of the Association shall be a President, two Vice-Presidents, a Secretary, and a Treasurer, and six other persons designated as Councillors, and these eleven shall constitute the Council. The President and two Councillors chosen by the Association shall retire annually, and for one year shall be ineligible for re-election to the same office. An Assistant Secretary may also be elected.

ARTICLE V

COUNCIL

The general control of the affairs of the Association, except as otherwise herein provided, shall be vested in the Council.

ARTICLE VI

ELECTION OF OFFICERS

Officers shall be elected by ballot at the annual meeting.

The Council shall have power to fill any vacancies which may occur in its membership between annual meetings.

ARTICLE VII

MEETINGS

A general meeting shall be held in each calendar year. Special meetings may be appointed by the Association or called by the Council. The time and place of the annual meeting shall be determined by the Association. In order to diffuse a knowledge of Museums and their work, the Association shall meet in a different city or town each succeeding year, unless otherwise determined by the Association.

At the annual meeting papers may be read, matters relating to Museums discussed, and any business relating to the affairs of the Association shall be transacted.

Special meetings may be called by the Council in emergencies, and only matters stated in the call shall be considered at such special meetings.

ARTICLE VIII

PUBLICATIONS

The publications of the Association shall be distributed free to all Sustaining and Active Members who have paid their dues for the year of issue. Associate Members may obtain the Proceedings in paper covers at one dollar, or in cloth binding at one dollar and twenty-five cents.

ARTICLE IX

AMENDMENTS

This Constitution may be amended by a two-thirds vote of the members present and voting at any meeting, provided that every proposed amendment shall be first considered by the Council and be reported by the Council with or without recommendation.

REPORT OF THE TREASURER OF THE AMERICAN ASSOCIATION OF MUSEUMS, PRESENTED AT THE ANNUAL MEETING BOSTON, MAY 23–25, 1911

Balance on hand at meeting, May 31, 1910 ..... $172.89

RECEIPTS

7	Active memberships for year ending May 15, 1910	14.10
135	Active memberships for year ending May 15, 1911	401.40
	Balance on 1 Active membership for year ending May 15, 1911	1.02
12	Active memberships for year ending May 15, 1912	36.00
1	Associate membership for year ending May 15, 1911	1.00
3	Life memberships	90.00
1	Sustaining membership for year ending May 15, 1910	10.00
29	Sustaining memberships for year ending May 15, 1911	415.00
1	Sustaining membership for year ending May 15, 1912	10.00
	Sale of publications	10.72
	Total receipts	$1162.13

EXPENDITURES

1910			
July	2, Whitehead & Hoag Co. (85 40-L buttons)	$6.59	
July	2, Daggett Printing Co. (stationery and printing)	2.50	
July	2, P. M. Rea, Secretary (typewriter rent, 8 mos)	16.00	
July	19, Reinecke & Zesch (printing)	6.50	
July	19, Daggett Printing Co. (programs and signs)	11.50	
July	19, L. L. Weeks (expenses at Buffalo)	28.20	
Aug.	1, A. B. Weaver (reporting proceedings)	80.00	
Aug.	1, George E. Curtis (group photograph)	5.00	
Aug.	1, P. M. Rea (miscellaneous expenses)	14.63	
Sept.	10, Philadelphia Museums (telegram)	.50	
Oct.	5, Postage stamps	1.00	
Oct.	7, Philadelphia Museums (stationery and printing)	3.20	
Oct.	8, Postage stamps	5.00	
Nov.	10, L. L. Weeks (services, 4 mos)	255.00	
1911			
Feb.	13, P. M. Rea, Secretary (miscellaneous expenses)	33.66	
Feb.	13, L. L. Weeks (services, Oct. and Dec.)	90.00	
Feb.	13, L. L. Weeks (services, Jan.)	16.00	
	Carried forward	$575.28	$1162.13

	Brought forward	$575.28	$1162.13
Mar. 17,	L. L. Weeks (services, Feb.)	30.00	
Apr. 24,	Charleston Paper & Box Co. (mailing cases)	9.00	
Apr. 24,	Daggett Printing Co. (printing and stationery)	11.25	
Apr. 24,	L. L. Weeks (services, Mar.)	35.00	
Apr. 24,	Charleston Museum (miscellaneous expenses for Secretary)	30.71	
May 1,	Postage stamps	.62	
May 3,	Buffalo Society of Natural Sciences (6 bound copies of Directory)	5.55	
May 17,	A. A. Clinger (services for Treasurer)	50.00	
May 19,	Woodstock Hardwood & Spool Mfg. Co. (book boxes)	12.49	
May 19,	L. L. Weeks (services, Apr. and May)	82.00	
May 19,	Whitehead & Hoag Co. (125 40-L buttons)	9.62	
May 19,	Williams & Wilkins Co. (postage and express)	16.20	
	Total expenditures		867.72
	Balance in treasury, May 20, 1911		$294.41

W. P. WILSON,
Treasurer.

Examined and found correct:
HENRY L. WARD,
HENRY R. HOWLAND,
WM. C. MILLS,
Auditing Committee.

MEMBERS OF THE AMERICAN ASSOCIATION OF MUSEUMS

SUSTAINING MEMBERS

The asterisk (*) denotes a Charter Member.

Academy of Natural Sciences of Philadelphia, Philadelphia, Pa.
*American Museum of Natural History, 77th St. and Central Park West, New York City.
*Art Association of Indianapolis (John Herron Art Institute), Indianapolis, Ind.
*The Art Institute of Chicago, Chicago, Ill.
Boston Society of Natural History, Boston, Mass.
*Brooklyn Institute Museum, Eastern Parkway, Brooklyn, N. Y.
*Carnegie Museum, Department of the Carnegie Institute, Pittsburgh, Pa.
*The Charleston Museum, Charleston, S. C.
*The Chicago Academy of Sciences, Lincoln Park, Chicago, Ill.
Cincinnati Museum Association, Cincinnati, Ohio.
City Art Museum, Forest Park, St. Louis, Mo.
Colorado Museum of Natural History, Denver, Col.
*The Corcoran Gallery of Art, Washington, D. C.
*Deseret Museum, Salt Lake City, Utah.
The Essex Institute, Salem, Mass.
*The Fairbanks Museum of Natural Science, St. Johnsbury, Vt.
*Field Museum of Natural History, Chicago, Ill.
Germanic Museum, Harvard University, Cambridge, Mass.
*Metropolitan Museum of Art, New York City.
Museo Nacional de Bogota, Bogota, Colombia.
Museum of the College of Liberal Arts, Northwestern University, Evanston, Ill.
*Museum of Fine Arts, Boston, Mass.
*New York Botanical Garden, Bronx Park, New York City.
*New York State Museum, Albany, N. Y.
Peabody Museum, Salem, Mass.
*Pennsylvania Museum and School of Industrial Art, Memorial Hall, Fairmount Park, Philadelphia, Pa.
Pennsylvania State Museum, Harrisburg, Pa.
The Philadelphia Museums, 34th St., below Spruce, Philadelphia, Pa.
*Public Museum of the City of Milwaukee, Milwaukee, Wis.
Syracuse Museum of Fine Arts, Syracuse, N. Y.
University of Nebraska, Lincoln, Neb.
*University Museum, Department of Archæology, University of Pennsylvania, Philadelphia, Pa.
Wadsworth Athenæum, Hartford, Conn.
Walker Museum, University of Chicago, Chicago, Ill.
*Washington State Art Association, Seattle, Wash.

LIFE MEMBERS

Clowes, Herbert, Landscape Modeler, Public Museum of the City of Milwaukee, Milwaukee, Wisconsin.

Crook, A. R., Curator, Illinois State Museum of Natural History, Springfield, Illinois.

Graves, F. P., Graves Private Museum, Doe Run, Mo.

*Hall, Robert C., Owner, Hall Museum of Anthropology, 240 Fourth Ave., Pittsburgh, Pa.

*Henshaw, Samuel, Curator, Museum of Comparative Zoology, Harvard University, Cambridge, Mass.

*Holland, W. J., Director, Department of the Museum, Carnegie Institute, Pittsburgh, Pa.

*Minot, Charles S., Harvard Medical School, Boston, Mass.

Parrish, James C., Southampton Art Museum, Southampton, Long Island, N. Y.

Parrish, Samuel L., Southampton Art Museum, Southampton, Long Island, N. Y.

*Talmage, James E., Director, Deseret Museum, Salt Lake City, Utah.

Thayer, John E., Director, Thayer Museum, Lancaster, Mass.

ACTIVE MEMBERS

*Adams, Charles C., Associate in Animal Ecology, University of Illinois, Urbana, Illinois.

Adickes, Thomas W., Assistant Curator, North Carolina State Museum, Raleigh, North Carolina.

Aitkin, Helen J., Assistant, Brooklyn Institute Museum, Brooklyn, N. Y.

*Akeley, C. E., Taxidermist-in-chief, Field Museum of Natural History, Chicago, Illinois.

*Allen, J. A., Curator of Mammalogy and Ornithology, American Museum of Natural History, New York City.

*Ami, Henry M., Geological Survey of Canada, 453 Laurier Ave.,East, Ottawa, Ontario.

Atkinson, D. A., Custodian of Reptiles, Carnegie Museum, Pittsburgh, Pa.

Austin, Thomas L., Curator, Erie Public Museum, Erie, Pa.

*Baker, Frank C., Curator, The Chicago Academy of Sciences, Lincoln Park, Chicago, Ill.

*Barber, Edwin Atlee, Director of Museum, Pennsylvania Museum and School of Industrial Art, Philadelphia, Pa.

*Barbour, Erwin Hinckley, Curator, State Museum, Lincoln, Neb.

Barbour, Thomas, Curator of Oceanica, Harvard University, Cambridge, Mass.

Barrett, S. A., Curator of Anthropology, Public Museum of the City of Milwaukee, Milwaukee, Wis.

*Beatty, John W., Director, Department of Fine Arts, Carnegie Institute, Pittsburgh, Pa.

*Bennett, Bessie, Assistant to the Director, The Art Institute of Chicago, Chicago, Ill.

*Berg, George L., Director, Washington State Art Association, Seattle, Wash.

Bethel, Ellsworth, President, Colorado Academy of Sciences, Denver, Col.

Beutenmüller, William, Curator, Department of Entomology, American Museum of Natural History, New York City.

Bibbins, Arthur Barneveld, Curator of the Museum, Goucher College, Baltimore, Md.

Blackman, Elmer Ellsworth, Archeologist, Nebraska State Historical Society, Lincoln, Neb.

*Brigham, William T., Director, Bernice Pauahi Bishop Museum, Honolulu, H. I.

Brimley, Herbert H., Curator, North Carolina State Museum, Raleigh, N. C.

*Britton, N. L., Director-in-chief, New York Botanical Garden, Bronx Park, New York City.

Brock, Clarence L., Director, Houston Museum and Scientific Society, Houston, Texas.

Brown, C. Emerson, Assistant in Vertebrate Zoology, Peabody Museum, Salem, Mass.

Brown, Charles E., Chief, State Historical Museum of Wisconsin, Madison, Wisconsin.

Brown, Stewardson, Conservator of Botanical Section, Academy of Natural Sciences, Philadelphia, Pa.

*Bryan, William Alanson, President, Pacific Scientific Institution, Box 38, Honolulu, H. I.

*Bryan, Mrs. William Alanson, Box 38, Honolulu, H. I.

Bryant, William L., Custodian of Museum, Buffalo Society of Natural Sciences, Buffalo, N. Y.

*Bumpus, Hermon C., Business Manager, University of Wisconsin, Madison, Wisconsin.

*Burchard, Edward L., Director, Social Museum, Chicago School of Civics and Philanthropy, Chicago, Ill.

Carpenter, Newton H., Secretary, The Art Institute of Chicago, Chicago, Ill.

Chapin, Willis O., President, Buffalo Fine Arts Academy, Buffalo, N. Y.

Clarke, John M., Director, New York State Museum, Albany, N. Y.

Coggeshall, Arthur S., Preparator-in-chief, Department of Paleontology, Carnegie Museum, Pittsburgh, Pa.

*Collie, George L., Curator, Logan Museum, Beloit College, Beloit, Wis.

*Comparette, T. Louis, Curator, Numismatic Collection, United States Mint, Philadelphia, Pa.

Cooper-Prichard, A. H., Librarian, American Numismatic Society, New York City.

Cory, Charles B., Curator of Zoology, Field Museum of Natural History, Chicago, Ill.

Courtney, Mrs. Elizabeth D., Assistant, Carnegie Museum, Pittsburgh, Pa.

Covert, Adolphe Boucard, Taxidermist, 5411 Madison Ave., Chicago, Ill.

Cummings, Carlos E., Secretary, Buffalo Society of Natural Sciences, Buffalo, New York.

Cushman, Joseph A., Assistant Curator, Boston Society of Natural History, Boston, Mass.

Dahlgren, B. E., Modeler, Department of Botany, Field Museum of Natural History, Chicago, Ill.

Dana, John Cotton, Secretary, Newark Museum Association, Newark, N. J.
*Dean, Bashford, Curator of Fossil Fishes, American Museum of Natural History; Curator of Arms and Armor, Metropolitan Museum of Art, New York City.
*de Forest, Robert W., Trustee and Secretary, Metropolitan Museum of Art, New York City.
*Dorsey, George A., Curator of Anthropology, Field Museum of Natural History, Chicago, Ill.
Douglass, Earl, Assistant in Research Section of Paleontology, Carnegie Museum, Pittsburgh, Pa.
*Dow, George Francis, Secretary and Curator, The Essex Institute, Salem, Mass.
*Dyche, L. L., Curator of Birds, Mammals, and Fishes, State University, Lawrence, Kan.
*Eastman, Charles R., Curator of Vertebrate Paleontology, Museum of Comparative Zoology, Harvard University, Cambridge, Mass.
*Eigenmann, Carl H., Curator of Ichthyology, Carnegie Museum, Pittsburgh, Pennsylvania.
Elliott, Huger, Director, Rhode Island School of Design, Providence, R. I.
Emerson, Alfred, Assistant to Director, The Art Institute of Chicago, Chicago, Illinois.
Failing, Henrietta H., Late Curator, Portland Art Association. Address: 617 Johnson Street, Portland, Oregon.
Fairbanks, Arthur, Director, Museum of Fine Arts, Boston, Mass.
*Farrington, Oliver C., Curator of Geology, Field Museum of Natural History, Chicago, Ill.
Forbes, Edward W., Director, Fogg Art Museum, Harvard University, Cambridge, Mass.
Foulke, J. B., Administrative Assistant, American Museum of Natural History, New York City.
*Fox, William Henry, Managing Director, John Herron Art Institute, Indianapolis, Ind.
*French, Wm. M. R., Director, The Art Institute of Chicago, Chicago, Ill.
Fuller, Robert Gorham, Assistant in American Archeology, Peabody Museum, Harvard University, Cambridge, Mass.
*Gallup, Anna Billings, Curator, Children's Museum, The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
Gardiner, Elizabeth M., Assistant to the Director, Worcester Art Museum, Worcester, Mass.
Gay, Frank Butler, Director, Wadsworth Atheneum and Morgan Memorial, Hartford, Conn.
*Gest, J. H., Director, Cincinnati Museum Association, Cincinnati, Ohio.
*Gilman, Benj. Ives, Secretary, Museum of Fine Arts, Boston, Mass.
Gittings, Maud J., Custodian of Library, Carnegie Museum, Pittsburgh, Pa.
Glenk, Robert, Curator, Louisiana State Museum, New Orleans, La.
Goodale, George Lincoln, Honorary Curator, Botanical Museum, Harvard University, Cambridge, Mass.
*Goodyear, Wm. H., Curator of Fine Arts, Brooklyn Institute Museum, Brooklyn, N. Y.

*Gordon, G. B., Director, University Museum, University of Pennsylvania, Philadelphia, Pa.

Graenicher, Sigmund, Curator of Invertebrate Zoology, Public Museum of the City of Milwaukee, Milwaukee, Wis.

Grant, U. S., Curator, Museum of the College of Liberal Arts, Northwestern University, Evanston, Ill.

Greenman, Jesse M., Assistant Curator of Botany, Field Museum of Natural History, Chicago, Ill.

*Greenman, Milton J., Director, The Wistar Institute of Anatomy, Philadelphia, Pennsylvania.

*Griffin, Delia Isabel, Director, The Fairbanks Museum of Natural Science, St. Johnsbury, Vt.

*Griffith, A. H., Director, Detroit Museum of Art, Detroit, Mich.

Grinnell, Joseph, Director, Museum of Vertebrate Zoology, University of California, Berkeley, Cal.

Gross, A. O., Taxidermist, University of Illinois Museum, Urbana, Ill.

Gueret, E. N., Assistant Curator, Division of Osteology, Field Museum of Natural History, Chicago, Ill.

*Hall, Christopher W., Curator, Geological Museum, University of Minnesota, Minneapolis, Minn.

Hall, F. S., Curator, State Museum, University of Washington, Seattle, Wash.

Hartman, C. V., Ethnographical Museum, Stockholm, Sweden.

*Henderson, Junius, Curator of the Museum, University of Colorado, Boulder, Colorado.

Henn, Arthur W., Assistant Curator, Indiana University Museum, Bloomington, Ind.

*Hollick, Arthur, Curator, Department of Fossil Botany, New York Botanical Garden, New York City.

*Hooper, Franklin W., Director, The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

*Hornaday, William T., Director, New York Zoological Park, New York City.

*Houston, S. F., Department of Archæology, University of Pennsylvania, Philadelphia, Pa.

*Hovey, Edmund Otis, Curator, Department of Geology and Invertebrate Paleontology, American Museum of Natural History, New York City.

Howe, George P., Peabody Museum, Harvard University, Cambridge, Mass.

Howe, Marshall A., Curator of the Museum, New York Botanical Garden, New York City.

Howland, Henry R., Superintendent, Buffalo Society of Natural Sciences, Buffalo, N. Y.

Hoyle, William Evans, Director, National Museum of Wales, City Hall, Cardiff, Wales.

Hutchinson, Charles L., President, Board of Trustees, The Art Institute of Chicago, Chicago, Ill.

Hyett, William James, Assistant in charge of Galleries, Department of Fine Arts, Carnegie Institute, Pittsburgh, Pa.

Jackson, Robert T., Assistant Curator, in charge of Paleontological Collections, Boston Society of Natural History, Boston, Mass.

*Jenkins, L. W., Curator of Ethnology, Peabody Museum, Salem, Mass.

Jennings, Otto E., Assistant Curator of Botany, Carnegie Museum, Pittsburgh, Pennsylvania.

Jennings, Mrs. Otto E., Assistant in Section of Botany, Carnegie Museum, Pittsburgh, Pa.

*Johnson, Charles W., Curator, Boston Society of Natural History, Boston, Mass.

Jones, Lynds, Curator, Zoological Museum, Oberlin College, Oberlin, Ohio.

Justice, William G., Buffalo Historical Society, Buffalo, N. Y.

*Kahl, Paul Hugo Isidore, Custodian, Section of Entomology, Carnegie Museum, Pittsburgh, Pa.

Kalmbach, Edwin R., Assistant, Division of Economic Investigations, Biological Survey, Washington, D. C.

Katzenberger, George A., Curator, Museum of Carnegie Library, Greenville, Ohio.

Kent, Henry W., Assistant Secretary, Metropolitan Museum of Art, New York City.

*Kermode, Francis, Curator, Provincial Museum, Victoria, B. C.

Koehler, Robert, Director, Minneapolis School of Fine Arts, Minneapolis, Minn.

*Kunz, George F., Honorary Curator of Gems, American Museum of Natural History, New York City.

*Lamb, Daniel Smith, Pathologist, Army Medical Museum, Washington, D. C.

Libbey, William, Director,E. M. Museum, Princeton, N. J.

*Lindahl, Josua, Late Director of the Museum, Cincinnati Society of Natural History, Cincinnati, Ohio. Address: 7732 Chauncey Ave., Chicago, Ill.

Link, Gustave, A., Taxidermist, Carnegie Museum, Pittsburgh, Pa.

Lippincott, Elsie, Librarian, Field Museum of Natural History, Chicago, Ill.

Loomis, Leverett Mills, Director of the Museum, California Academy of Sciences, San Francisco, Cal.

*Lucas, Frederic A., Director, American Museum of Natural History, New York City.

MacAlister, Mary T., Curator, Drexel Institute Museum, Philadelphia, Pa.

*MacCurdy, George Grant, Curator, Section of Anthropology, Yale University Museum, New Haven, Conn.

*McGee, W J, Secretary, Inland Waterways Commission, Department of Agriculture, Washington, D. C.

*McGuire, F. B., Director, The Corcoran Gallery of Art, Washington, D. C.

McIlvaine, Caroline M., Librarian, Chicago Historical Society, Chicago, Ill.

McIlvaine, Mabel, Assistant, Metropolitan Museum of Art, New York City.

McIntosh, William, Curator, Natural History Museum, St. John, N. B.

Maddox, Robert D., Curator, Medical Museum, University of Cincinnati, Cincinnati, Ohio.

Madison, H. L., Curator, Park Museum, Providence, R. I.

Martin, Daniel S., Honorary Curator, Department of Geology, The Charleston Museum, Charleston, S. C.

Meek, Seth E., Curator, Department of Ichthyology, Field Museum of Natural History, Chicago, Ill.

Mengel, Levi W., Director, Reading Public Museum Reading, Pa.

Meyers, Ira B., Curator, School of Education Museum, University of Chicago, Chicago, Ill.

Miller, A. W., Curator, Oregon Academy of Sciences, Portland, Ore.

*Mills, William C., Curator and Librarian, Ohio State Archæological and Historical Society, Ohio State University, Columbus, Ohio.

Millspaugh, Charles F., Curator of Botany, Field Museum of Natural History, Chicago, Ill.

Millspaugh, Mrs. Charles F., Chicago, Ill.

*Miner, Roy W., Assistant Curator of Invertebrate Zoology, American Museum of Natural History, New York City.

*Montgomery, Henry, Curator of the Museum, University of Toronto, Toronto, Ontario.

Montgomery, Thomas L., Director, Pennsylvania State Museum, Harrisburg, Pennsylvania.

Moorehead, Warren K., Curator, Department of Archæology, Phillips Academy, Andover, Mass.

Morris, E. L., Curator of Natural Science, Brooklyn Institute Museum, Brooklyn, N. Y.

Morse, Albert P., Curator of Zoology, Wellesley College, Wellesley, Mass.

*Morse, Edward S., Director, Peabody Museum, Salem, Mass.

*Morse, Silas R., Curator, New Jersey State Museum, Trenton, N. J.

Murphy, Robert Cushman, Curator, Division of Mammals and Birds, Brooklyn Institute Museum, Brooklyn, N. Y.

*Nachtrieb, Henry F., Curator, Zoological Museum, University of Minnesota, Minneapolis, Minn.

Nichols, Henry W., Assistant Curator of Geology, Field Museum of Natural History, Chicago, Ill.

Ortmann, Arnold E., Curator of Invertebrate Zoology, Carnegie Museum, Pittsburgh, Pa.

Osgood, Wilfred H., Assistant Curator of Mammalogy and Ornithology, Field Museum of Natural History, Chicago, Ill.

Paarmann, J. H., Curator, Davenport Academy of Sciences, Davenport, Iowa.

Parkinson, Edward K., Director, Albany Institute, Albany, N. Y.

Peabody, Charles, Assistant in European Archeology, Peabody Museum, Harvard University, Cambridge, Mass.

Perine, Clara N., Assistant to Director, The Wistar Institute of Anatomy, Philadelphia, Pa.

*Peterson, Harry C., Director, Leland Stanford Junior Museum, Palo Alto, Cal.

*Peterson, Olaf August, Field Collector and Preparator of Mammals and Birds, Carnegie Museum, Pittsburgh, Pa.

Pickard, John, University of Missouri, Columbus, Mo.

Pilsbry, Henry A., Curator, Academy of Natural Sciences, Philadelphia, Pa.

Pitkin, Albert Hastings, Curator of Ceramics, Morgan Memorial, Wadsworth Atheneum, Box 867, Hartford, Conn.

Pollard, Agnes L., Museum Assistant, Staten Island Association of Arts and Sciences, New Brighton, N. Y.

Pollard, Charles Louis, Curator-in-chief, Museum of Staten Island Association of Arts and Sciences, New Brighton, N. Y.

Porter, Carlos E., Director, Museo de Historia Natural de Valparaiso, Santiago, Chile.

Prentice, Sydney, Artist and Illustrator, Carnegie Museum, Pittsburgh, Pa.

Putnam, Edward K., Acting Director, Davenport Academy of Sciences, Davenport, Iowa.

*Putnam, Frederick W., Honorary Curator, Peabody Museum, Harvard University; Professor Emeritus of Anthropology, University of California. Address: Cambridge, Mass.

Ranck, Samuel H., Librarian, Grand Rapids Public Library, Grand Rapids, Michigan.

*Rathbun, Richard, Assistant Secretary, Smithsonian Institution, in charge United States National Museum, Washington, D. C.

*Rathmann, C. G., Director, Educational Museum, St. Louis, Mo.

*Raymond, Percy E., Invertebrate Paleontologist, Geological Survey of Canada, Ottawa, Ontario.

*Rea, Paul M., Director, The Charleston Museum, Charleston, S. C.

Reinecke, Ottomar, Buffalo Society of Natural Sciences, Buffalo, N. Y.

Rice, William North, Wesleyan University Museum, Middletown, Conn.

Riggs, Elmer Samuel, Assistant Curator of Paleontology, Field Museum of Natural History, Chicago, Ill.

Robinson, Edward, Director, Metropolitan Museum of Art, New York City.

Robinson, John, Keeper of East India Marine Society Relics, Peabody Museum, Salem, Mass.

Rothermel, John G., Superintendent, Wagner Free Institute of Science, Philadelphia, Pa.

*Rothrock, Boyd P., Curator of Natural History, Pennsylvania State Museum, Harrisburg, Pa.

Rothrock, Mrs. Boyd P., Accessionist and Foliage Worker, Pennsylvania State Museum, Harrisburg, Pa.

Rowe, Louis Earle, Docent, Museum of Fine Arts, Boston, Mass.

Ruthven, Alexander G., Head Curator of the Museum, University of Michigan, Ann Arbor, Mich.

Sage, Cornelia Bentley, Director, Albright Art Gallery, Buffalo, N. Y.

Santens, Jos. A., Preparator, Taxidermic Laboratory, Carnegie Museum, Pittsburgh, Pa.

*Santens, Remi H., Preparator, Taxidermic Laboratory, Carnegie Museum, Pittsburgh, Pa.

Sargent, Herbert E., Director, Kent Scientific Museum, Grand Rapids, Mich.

Schoff, Wilfred H., Secretary and Assistant Treasurer, The Philadelphia Museums, Philadelphia, Pa.

*Schuchert, Charles, Curator of Geology, Peabody Museum, Yale University, New Haven, Conn.

Severance, Frank H., Secretary, Buffalo Historical Society, Buffalo, N. Y.

Shafer, John A., Custodian of the Museums, New York Botanical Garden, Bronx Park, New York City.

*Sherwood, George H., Assistant Secretary, American Museum of Natural History, New York City.

Shrosbree, George, Chief Taxidermist, Public Museum of the City of Milwaukee, Milwaukee, Wis.

Simms, S. C., Assistant Curator of Anthropology, Field Museum of Natural History, Chicago, Ill.

*Skiff, Frederick J. V., Director, Field Museum of Natural History, Chicago, Ill.

Skinner, Henry, Curator, American Entomological Society, Academy of Natural Sciences, Philadelphia, Pa.

Slocum, Anna D., Pond Street, Jamaica Plain, Mass.

Small, John K., Head Curator of the Museums and Herbarium, New York Botanical Garden, Bronx Park, New York City.

Smith, Frank, Curator of Museum, University of Illinois, Urbana, Ill.

Smith, Lee H., Vice-President, Buffalo Society of Natural Sciences, Buffalo, N. Y.

*Smith, T. Guilford, President, Buffalo Society of Natural Sciences, Buffalo, N. Y.

Sterki, Victor, Assistant in Conchology, Carnegie Museum, Pittsburgh, Pa. Address: New Philadelphia, Ohio.

Stevens, Mrs. George W., Assistant Director, Toledo Museum of Art, Toledo, O.

Stevenson, Mrs. Cornelius, Assistant Curator and Lecturer, Pennsylvania Museum and School of Industrial Art, Philadelphia, Pa.

Stewart, Douglas, Assistant to Director, Carnegie Museum, Pittsburgh, Pa.

*Stone, Witmer, Curator, Academy of Natural Sciences, Philadelphia, Pa.

Stotsenberg, J. MacPherson, Curator, The Wistar Institute of Anatomy, Philadelphia, Pa.

Strecker, John K., Jr., Curator, Baylor University Museum, Waco, Texas.

Swarth, Harry S., Curator of Ornithology, Museum of Vertebrate Zoology, University of California, Berkeley, Cal.

Sweeney, Arthur, Secretary, St. Paul Institute, St. Paul, Minn.

Taylor, W. P., Assistant Curator of Mammals, Museum of Vertebrate Zoology, University of California, Berkeley, Cal.

Tobitt, Edith, Librarian, Omaha Public Library and Museum, Omaha, Neb.

Toothaker, Charles R., Curator, The Philadelphia Museums, Philadelphia, Pa.

*Tower, Ralph W., Curator of Physiology, and Books and Publications, American Museum of Natural History, New York City.

*Townsend, Charles H., Director, New York Aquarium, Battery Park, New York City.

*Townsend, Louis H., Osteologist, Carnegie Museum, Pittsburgh, Pa.

Tozzer, Alfred M., Assistant in Central American Archeology, Peabody Museum, Harvard University, Cambridge, Mass.

Trask, John E. D., Secretary and Manager, Pennsylvania Academy of Fine Arts, Philadelphia, Pa.

Uhle, Max, Director, Museo de Historia Nacional, Lima, Peru.

Van Horne, Mary, Librarian, The Art Institute of Chicago, Chicago, Ill.

Wagenseller, B. Meade, Assistant, The Philadelphia Museums, Philadelphia, Pa.

*Ward, Henry L., Director, Public Museum of the City of Milwaukee, Milwaukee, Wisconsin.

Weeks, Laura L., Secretary to the Director, The Charleston Museum, Charleston, S. C.

Weller, Stuart, Curator, Walker Museum, University of Chicago, Chicago, Ill.

Whitmore, Francis E., Curator, Higgins Museum, Cortland, N. Y.

*Wilcomb, C. P., Curator, Oakland Public Museum, Oakland, Cal.
*Willoughby, Charles C., Assistant Curator, Peabody Museum, Harvard University, Cambridge, Mass.
Wilson, Charles R., Vice-President, Buffalo Historical Society, Buffalo, N. Y.
Wilson, P. C., President, Board of Trustees, Chattanooga Museum, Chattanooga, Tennessee.
*Wilson, W. P., Director, The Philadelphia Museums, Philadelphia, Pa.
*Wissler, Clark, Curator of Anthropology, American Museum of Natural History, New York City.
Woodruff, Frank M., Ornithologist, The Chicago Academy of Sciences, Chicago, Ill.
Zeller, August, Superintendent of Installation of Architecture and Sculpture, Department of Fine Arts, Carnegie Institute, Pittsburgh, Pa.
*Zierden, Alicia M., Curator, Division of Education, Pennsylvania State Museum, Harrisburg, Pa.

ASSOCIATE MEMBERS

Flint, Sarah G., Assistant, Museum of Fine Arts, Boston, Mass.
Hall, Mrs. Robert C., Pittsburgh, Pa.
Howe, Winifred E., Metropolitan Museum of Art, New York City.
Levy, Florence N., Assistant, Metropolitan Museum of Art, New York City.
Lothrop, Stanley B., Museum of Fine Arts, Boston, Mass.
Lucas, Mrs. Frederic A., New York City.
MacLean, J. Arthur, Assistant, Museum of Fine Arts, Boston, Mass.
Morris, Mrs. E. L., Brooklyn, N. Y.
Morris, Frances, Assistant, Metropolitan Museum of Art, New York City.
Paull, Florence V., Assistant, Museum of Fine Arts, Boston, Mass.
Putnam, Alice E., Cambridge, Mass.
Putnam, Mrs. Frederick W., Cambridge, Mass.
Rea, Mrs. Paul M., Charleston, S. C.
Shields, Mabel A., Curator, The Fairbanks Museum of Natural Science, St. Johnsbury, Vermont.
Spinney, E. M., Boston, Mass.
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